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PROCEEDINGS OF THE CHIEF CONSERVATOR OF FORESTS
No. 424, PRESS, DATED 3RD OCTOBER 1931

REVISED WORKING PLAN

1929-30 TO 1938-39

FOR THE

YERRAMALAIS IN KURNOOL WEST FOREST DIVISION

PREPARED BY

MUHAMMAD AMIR PADSHA SAHIB BAHADUR
Extra Assistant Conservator of Forests

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INTRODUCTION.

THE earliest working plan for the forests of the Yerramalais was sanctioned in B.P. Forest No. 328, dated 16th December 1903. Subsequently as a number of other areas in the Yerramalais were created as reserved forests, a revision of the working plan, to bring all the Yerramalai forests under one definite management, was found necessary. A revised working plan was therefore prepared and sanctioned in B.P. Forest No. 227, dated 19th October 1906. It dealt with all the reserves of the Kurnool, the old Pattikonda and Owk ranges.

In practice it was found that it prescribed cultural operations on such a large scale that a ranger was not able to supervise them all effectively. Concentration of cultural work was found necessary. Moreover it was felt that, so far as the Yerramalais were concerned, grazing was incompatible with the aim of restocking the forests. It was thought that the forests that came under systematic working should be permanently closed to grazing. For these reasons the plan was revised a second time—vide B.P. Forest No. 16, dated 24th January 1913, the method of treatment prescribed being " Improvement fellings."

In 1917, however, the method of treatment was changed to " coppice with standards," in B.P. Forest No. 244, Mis., dated 25th October 1917.

In 1919, the District Forest Officer suggested various modifications, chief of which were to reduce the width of the fire-lines, to restrict fire-protection operations to the more important reserves and to abandon cultural operations. On this the Board in its Proceedings Forest No. 579, Routine, dated 5th May 1919, ordered that Part II of the working plan should be rewritten.

But nothing was done on account of changes of District Forest Officer, and vacillation in regard to the exact method of treatment required.

In 1925, a revised working plan was prepared. It provided for (1) a large increase in the number of felling series, (2) regeneration of certain areas by artificial means, and (3) working the yepi area under " coppice with standards," and the non-yepi area under " simple coppice."

But in view of (1) the reclassification of reserved forests which followed, and resulted in the handing over of many to panchayats, (2) a large decrease in the consumption of fuel due to groundnut shell coming into use and (3) the presence of fairly abundant natural regeneration of *Hardwickia binata* amidst thick grass, the Conservator, after inspecting portions of the Yerramalais in 1926, ordered that the working plan should again be revised on the lines laid down by him which were—

(1) that the yepi area fit to be improved should be worked under the prescriptions of the 1913 working plan (i.e., improvement fellings) and walled and permanently closed to grazing;

(2) that the yepi area not fit to be improved should be pollarded for yepi fibre; and

(3) that the non-yepi area, fit for the production of fuel, should be worked under " simple coppice."

This proposal was approved by the Chief Conservator in his Proceedings No. 100, Press, dated 6th May 1926.

Mr. F. R. Madan, Conservator of Forests, disagreed with some of these views and in his M. 2-249/27, dated 11th August 1927, ordered that areas fit for felling should be worked under the system of "coppice with standards" and that the idea of walling should be abandoned on account of the expense involved and of its doubtful utility in helping the establishment of regeneration.

A working plan was drafted on the above lines by Mr. George Venugopal and submitted to the Conservator on 21st September 1928, but it had to be re-written and in doing so opportunity was taken to incorporate in the present plan certain additional instructions issued by the Conservator in his inspection note, dated 27th May 1929.

The additional features are—

(1) the provision of larger number of fuel series to meet the demands of the villages in the neighbourhood of reserves than was contemplated originally; and

(2) an attempt at concentrated regeneration of sandalwood in small plots laid out in suitable localities in each forest guard's beat.

PART I.

Summary of Facts on which the proposals are based.

CHAPTER I.—TRACT DEALT WITH.

1. This plan deals with the tract known as the Yerramalais situated in the western portion of the Kurnool district. They comprise the present Kurnool and Dhone ranges. They lie between longitude 77°30 and 78°30 and lattitude 15 and 15°55.

2. *Configuration of the ground.*—These forests extend from the Tungabhadra river on the north as far as the Anantapur district boundary on the south, and from the valley of Kunderu river on the east, to the Bellary district boundary on the west, enclosing the basin of the Hundri river. At the confluence of the Hundri with the Tungabhadra is situated Kurnool town, the headquarters of the district. A small portion of the forest towards the south lies within the drainage of the Pennar river.

The average height of the hills above the surrounding country may safely be taken at 500 feet. Some of the highest peaks are Dhonekonda 2,040 feet in south Dhone, and Katamraj 2,040 feet in north Dhone. The average height of the plains above the sea level is about 1,000 feet. Pyapalli at the south is about 750 feet above Kurnool in the north.

3. *Underlying rock and soil.*—The underlying rock varies considerably. In some reserves, limestone is met with and in others shale and sandstone. It is not uncommon to find areas containing a rock formation of limestone, shale and sandstone in varying degree of mixture.

The surface soil varies in different localities according to the presence of sandstone, shale or limestone or the varying degrees in which they have been mixed and is generally of little depth especially when the underlying rock is sand or limestone.

Barytes, copper, corundum, and steatite occur in some of the reserves. Diamonds are believed to have been found in the Lanjabanda reserved forest. Of all these, barytes and flooring slabs of shale are commercially the most important and they are found in Betamcherla, Panyam and Jaladurgam reserves.

4. *Climate and rainfall.*—The temperature varies between 50° in December and 110° in May. The hot weather begins in March, and lasts till the middle of June and is very severe. The south-west monsoon is the chief source of water-supply and the largest rainfall occurs between the two monsoons. The north-east monsoon clouds generally pass over without much benefit. The cold season is from October to February when the nights are cold followed by bright but not hot days. The air is moist during the rains and dry from December. The direction of wind is from east to west from October to May and with force in the opposite direction as long as the south-west monsoon lasts. There is generally a change in the direction in September followed by an occasional calm when it is hot and oppressive.

The Yerramalais are fairly healthy. The average rainfall is 22·82 inches. The statement in Appendix I gives the annual rainfall for each quarter for the past ten years.

5. *Water-supply.*—The Yerramalais form the head-waters of numerous small streams, which discharge into the Hundri and the Kunderu rivers. In the summer all these dry up. So do the tanks and wells surrounding this area, of which there are many. Scarcity of water in the summer is very severe.

6. *State of boundaries.*—All reserves are demarcated by 12-foot wide cleared lines with masonry or dry rubble cairns or stone slabs at each bend and they are maintained fairly well.

7. *Distribution, area and legal position.*—The aggregate area of the reserves dealt with is 190,641·73 acres or 298·04 square miles. All these forests have been notified as reserved forests under section 16 of the Madras Forest Act. Appendix II gives the number and dates of these notifications and area of each reserve.

8. *Rights and concessions.*—The rights admitted are in the nature of easements such as rights of way, temples, etc., and do not interfere with the working of the forests.

CHAPTER II.—THE FORESTS.

9. *Composition and the condition of the crop.*—Appendix III (pages 25–27) contains a brief description of each reserve. *Hardwickia binata* (yepi) is the most important species occurring throughout the hilly portion and it is being successfully introduced into other reserves, where it was either scarce or absent. It attains a fairly good size and height compared with any other species. *Tectona grandis* (teak), *Anogeissus latifolia* (chiruman) and *Terminalia tomentosa* (nallamaddi) affect special localities and are either gregarious or mixed with other species but they are stunted. Owing to scanty rainfall, all the forests are open in character.

Natural reproduction of yepi has been very poor but since lopping of yepi trees for fibre has been put a stop to in most localities, and the forests brought under systematic treatment, natural seedlings of yepi are beginning to come up in many of the reserves.

Drought and grazing are the two main factors that retard the establishment of natural regeneration. It is only when the prolonged drought which follows the rains and continues for about nine months is interrupted by rainfall that some of them survive. Therefore it is usual to come across a group of young seedlings in one place and a patch several years older at another. For successful regeneration, rainfall should be regular or the seedlings should be able to pass through the strata affected by drought before they are killed. Yepi does not reproduce itself by root-suckers. Old yepi as well as *Albizzia amara* (chigara) die when coppiced. Young yepi coppices well. It may therefore be advisable to work yepi on a shorter rotation for fuel instead of growing it for timber. Most of the old yepi trees are hollow and unsound.

The average height which trees attain in the Yerramalais is 20 feet. Appendix IV gives a list of the more important species found in the Yerramalais.

10. *Injuries to which the crop is liable.*—Hacking of *Hardwickia binata* for fibre and fodder, overgrazing and fire are the chief injuries to which the crop is liable. Illicit removal of *Hardwickia binata* has been the profession of a set of "Boyas" and "Sugalis" and though this has been put down to a large extent, its complete eradication has not yet been accomplished. North Dhone, Jaladurgam, Oddapalle, Lanjabanda and Betamcherla reserves suffer most from the hacking of yepi trees for fibre.

CHAPTER III.—UTILIZATION OF THE PRODUCE.

11. *Agricultural wants of the people.*—Dry cultivation is the main occupation of the ryots of the surrounding villages. Their chief requirements are—

(1) small timber for agricultural implements and for house-building purposes;

(2) fuel, mainly, for local consumption;

(3) charcoal for local consumption and export;

(4) yepi-fibre for rope-making;

(5) minor forest produce for local use; and

(6) grazing.

There are a large number of cattle and sheep farmers whose demand for grazing has to be met by this area. Fodder and thatch grass is permitted to be removed free in head-loads, for *bona fide* domestic use. The demand for manure-leaf is practically nil.

12. Particulars regarding the grazing incidence (average for the two years 1928–29 and 1929–30) are given below :—

Name of range.	Average area open to grazing.	Animals admitted.						Total number of cow units (ordinary).	Grazing incidence (acres per cow unit).
		Non-penta.			Penta.				
		Cows.	Buff.	Sheep.	Cows.	Buff.	Sheep.		
	ACS.								ACS.
Kurnool ..	82,856·00	6,851½	1,579	11,142	2,181	..	..	19,153	4·33
Dhone ..	88,425·10	10,640½	940	13,874½	715	..	87½	20,505	4·31
Total ..	171,281·10	17,492	2,519	25,016½	2,896	..	87⅓	39,658	..

13. *Markets.*—For fuel, the chief markets are Kurnool, Dhone and Nandyal. Due to the introduction of the groundnut shell fuel in the several factories, the demand for fuel has decreased in Kurnool. Yet fuel scarcity is a chronic feature. Large quantities of fuel are imported from the Nizam's dominions to supplement that which is supplied from the Government forests. At Dhone, there is a thriving lime-kiln industry which consumes a fair quantity of fuel. Charcoal is consumed locally at Kurnool, Nandyal, Dhone and is also exported to places like Guntakal, Adoni and Bellary. The other items of forest produce are consumed locally.

14. *Lines of export.*—The following are the main lines of export :—

(1) The Madras and Southern Mahratta Railway including the Dhone-Kurnool section.

(2) The Kurnool-Cuddapah cannal.

(3) The Kurnool-Atmakur road.

(4) The Kurnool-Nandyal road.

(5) The Betamcherla-Somayajulupalle road branching from No. 4.

(6) The Kurnool-Gooty road.

(7) The Banganapalle-Pyapalli road.

(8) The Panyam-Tadpatri road.

(9) The Kurnool-Bellary road *via* Kodumur.

(10) The branch road from Jonnagiri to Pyapalle.

(11) The famine road from Veldurthi *via* Ramalakota.

(12) The famine road from Malkapuram to Yadalsi.

(13) The branch road from No. 3 Bapanakotkur to Pudur.

15. *Methods of exploitation.*—Fuel and yepi-fibre coupes are sold annually in public auction to contractors who effect the felling of fuel and the extraction of fibre, with the help of coolies of the adjoining villages and the produce is either carted or railed to centres of consumption. The right to collect tangedu and rela bark and other minor forest produce is also sold in public auction. Mature palmyra trees in the Alamoor and Bogeswaram plantations and Owk extension reserve are marked and sold standing, the purchasers felling and removing them under departmental supervision.

16. *Past and present prices.*—The price of firewood at Kurnool is very fluctuating. On occasions it has gone up to Rs. 28 per ton. The following is the current average rate per ton at Kurnool :—

	RS.		RS.	
Unsplit, large	14	to	16	per ton.
Small wood which does not require splitting ...	16	to	20	per ton.
Split wood	20	to	24	per ton.
Cleaned yepi fibre	2	to	2½	per maund of 24 lb.

CHAPTER IV.—STAFF AND LABOUR SUPPLY.

17. *Staff.*—A statement showing the distribution of staff as finally sanctioned is given in Appendix V.

18. *Labour supply.*—From June to September ryots are generally engaged in ploughing their fields and from November to January in harvesting the produce. During these months it is very difficult to procure either labour or carts.

During the non-agricultural season labour can be easily procured.

CHAPTER V.—PAST SYSTEM OF MANAGEMENT.

19. *Past and present systems of treatment.*—Before the forests were taken up for reservation, people did much as they liked with the forests, clearing and cultivating them for catch crop, hacking yepi trees for fibre or uprooting them for the manufacture of charcoal.

The reservation of these forests began in 1891, and was almost completed by 1904. Timber and fuel were permitted to be removed on permits and goats were allowed to graze in some selected localities.

The first working plan for these forests was sanctioned in B.P. Forest No. 328, dated 16th December 1903. " Coppice with standards " was the method of treatment prescribed with a 40-year rotation except in the case of Veldurti reserve for which a 20-year rotation was adopted. Coupes were closed to grazing for ten years after the year of felling.

Woddamanu reserve was added in B.P. Forest No. 132, dated 8th July 1904.

This plan was revised in B.P. Forest No. 227, dated 19th October 1906, and it dealt with the reserves of the old Kurnool and Pattikonda ranges. " Coppice with standards in a modified form, which is, more or less, a system of improvement fellings " was the method of treatment prescribed with the same 40-year rotation. The quantity of fuel to be removed was restricted to 68 stacked cubic feet or less per acre. The period of closure of the felled coupes was left to the discretion of the District Forest Officer.

It was considered that closure of felled coupes to grazing should go on to the end of the rotation and that fellings and cultural operations should be concentrated. This plan underwent a further revision and was sanctioned in B.P. Forest No. 16, dated 24th January 1913. The method of treatment and rotation remained the same as in the previous (1906) working plan. The forests of each range were divided into areas fit for timber and fuel and areas fit for grazing only and the former were constituted into working circle. Thus two (Kurnool and Pattikonda) Working Circles were formed. Costly cultural operations were also prescribed. The method of treatment was however, changed to " coppice with standards " in B.P. Forest No. 294, Mis., dated 25th October 1917, and this is in force now. In 1919 again further modification of some of its prescriptions was sought for and on this, the Board in its Proceedings, Forest No. 579, Routine, dated 5th May 1919, ordered that Part II of the working plan should be rewritten. But for one reason or other the proposed revision was delayed.

In 1922–23, a fuel coupe of 30 acres in extent was opened in Jaladurgam reserve, and leased out. But when the third coupe in this series was put up for sale there was no demand for it. In the same reserve another provisional fuel series was opened in 1925–26. Four coupes have been worked in it and the fifth coupe is under working.

The costly cultural operations and stone-walling the worked coupes were disappointing in their results and had to be given up. In coupes where " coppice with standards " method of treatment was adopted a new crop of coppice shoots and seedling trees has come up. In coupes, worked under the old method of improvement fellings with an yield limit the trees that were left to grow have not improved to the extent they were expected to do; nor is there any chance of their improving hereafter.

In the case of a very degraded forest, the so-called improvement fellings are not suitable, as many of the trees retained as standards are unsound. Yepi to be useful as timber should grow up to at least 4 feet in girth. But in this area, with a precarious rainfall, not only does it take a very long time, probably 80 years, to attain that girth but it generally becomes unsound after it reaches about 24 inches girth and even in the best of localities it deteriorates after it reaches about 36 inches girth. It is not worth while, therefore, to retain it for any length of time. " Coppice with standards " method of treatment, unfettered by any limit as to yield, will enable the removal of all unsound and useless trees and their replacement by a good crop of coppice and seedling trees.

20. *Yepi fibre.*—In the villages that adjoin the North Dhone, Lanjabanda and Bethamcherla, there lives a criminal tribe called " Boyas " who are professional smugglers of yepi fibre, for which there is a large demand. To meet this demand a scheme to work selected areas for yepi fibre, on a rotation of five years was prepared and sanctioned in B.P. Forest No. 529, dated 10th August 1915. This scheme was in force for a year only and was dropped till 1925 in which year three series, on a four-year rotation were tentatively formed in North Dhone, Lanjabanda and, Bethamcherla reserves. In 1926–27 another series was opened in the Jaladurgam reserve on a four-year rotation with coupes 100 acres each in area.

The Conservator in his M.2. 1786–26, dated 11th August 1927, ordered that the rotation for the yepi fibre should be ten years. This is being provisionally followed and there are four series in North Dhone, Lanjabanda, Bethamcherla and Jaladurgam reserves.

21. *Palmyras.*—Palmyras in the Alamoor tope and in Bogeswaram tope (Gani reserve) of Kurnool range are being worked but not under any recognized system of management. Mature trees are bieng marked and sold to the public year after year.

The palmyra tope in the Owk extension reserve of Dhone range was being worked under the provisions of the working plan sanctioned in B.P. Forest No. 289, dated 21st November 1911. The whole palmyra area was divided into twenty annual coupes and the possibility was fixed at 100 trees per year. Artificial regeneration by dibbling of palmyra seeds was prescribed and the whole area was closed to grazing to encourage natural regeneration. The cultural operations were not successful and provision had to be made for grazing. This working plan was therefore cancelled in B.P. Forest No. 115, Mis., dated 18th March 1916. Since then no regular system of working is in force but mature trees are being extracted every year. The following statement shows the number of trees extracted and the revenue realized every year, since 1916.

Year.	Number of trees.	Revenue realized.
		RS.
1916–17	116	432
1917–18	115	415
1918–19	273	1,130
1919–20	100	80
1920–21	100	350
1921–22	Not available.	
1922–23	60	180
1923–24	177	531
1924–25	294	883
1925–26	198	545
1926–27	300	974
1927–28	200	732
1928–29	382	1,101

22. The Veldurti reserve, containing babul growth, was worked as per prescription of the working plan sanctioned in B.P. Forest No. 238, dated 16th December 1903. The rotation adopted was twenty years. " Coppice with standards " method of treatment was prescribed; and the whole area was closed to grazing. Babul, contrary to expectation, did not coppice well. In 1920, the

whole area was found to contain a young crop of "babul" being the result of natural regeneration and such of the advanced growth as had been allowed to grow. It was not possible therefore to go through a second rotation.

In 1920, a simple scheme prescribed restocking of the blanks, thinning the congested area and closing the whole reserve to grazing. The cultural operations were disappointing and the Conservator in his M.2. 1586/27, dated 5th August 1927, ordered their discontinuance and opening the area to grazing. Thinning is however being continued.

23. *Minor forest produce.*—The right to collect minor forest produce is being leased out annually in convenient blocks.

The right to catch fish in the Alamoor tank is leased out annually.

24. *Special works of improvement undertaken.*—(*a*) Costly cultural operations for restocking the denuded slopes were undertaken in the different reserves. The results of these operations were not successful, the cost was prohibitive and they had to be given up.

(*b*) *Fire-protection operation.*—The fire-protection operation in this area consisted of fire-tracing 60 feet wide fire-lines outside the stone-walling, the periphery of the felled coupes and the rights of way to a width of half a chain on either side.

(*c*) *Stone-walling.*—To help natural regeneration and prevent grazing, the felled coupes in South Dhone, Gadidamadugu and Yaperlapad reserves were stone-walled at a total cost of Rs. 6,872-3-11 to a length of about 27 miles as shown under:—

(1) South Dhone Reserve—11 miles, 3 furlongs, $4\frac{1}{4}$ chains.
(2) Gadidamadugu—6 miles, 11 yards.
(3) Yaperlapad—9 miles 5 furlongs, 6 yards.

The walls were 3 feet high, 3 feet wide at base and $1\frac{1}{2}$ feet at top (vide B.P. Forest No. 16, dated 24th January 1913).

25. *Roads and Buildings*—(*a*) *Roads.*—There are no forest roads passing through reserves. But there are innumerable cart-tracks which help the transport of produce.

(*b*) A list of buildings with their cost and year of construction is given in the Appendix VI.

26. *Past yield.*—A statement showing the yield for each reserve since 1912–13 is given in Appendix VII. In the Woddaman reserve, a coupe of 120 acres was worked in 1912–13, and the average yield per acre was 97 cubic feet of fuel. In the Gadithamadugu reserve 6 coupes, aggregating in area to 833 acres, were worked between 1913–14 and 1917–18, which gave an average yield per acre of 94 cubic feet of fuel. In the Yeperlapad reserve 11 coupes aggregating in area to 1,553 acres, were worked between 1918–19 and 1928–29 which gave an average yield per acre of 173 cubic feet of fuel. In the South Dhone reserve 12 coupes, aggregating in area to 217 acres were worked between 1912–13 and 1923–24, which gave an average yield per acre of 90 cubic feet of fuel. In the Kamalapuram reserve 5 coupes, aggregating in area to 930 acres, were worked between 1924–25 and 1928–29, which gave an average yield per acre of 168 cubic feet of fuel.

27. *Past revenue and expenditure.*—Appendix VIII gives the revenue and expenditure for the past five years. The average annual total gross revenue (for the five years ending 1928–29) for the Kurnool and Dhone ranges was Rs. 28,288 and Rs. 36,173 respectively; and the average annual total expenditure taken for the same period for the Kurnool and Dhone ranges was respectively Rs. 8,021 and Rs. 9,166.

CHAPTER VI.—STATISTICS OF GROWTH AND YIELD.

28. (*a*) To determine the rate of growth of coppice and to ascertain the difference in the amount of natural regeneration of yepi in the walled and unwalled areas, enumerations in three and five acre sample plots in different worked-coupes, over an aggregate area of 45 acres, were carried out and the results are reduced to one acre and furnished in Appendix IX.

In the felled coupes there are 114 seedlings over 5 acres or 23 seedlings on an average per acre in the walled area, whereas in the unwalled area there are 80 seedlings over 4 acres or 20 seedlings per acre. Though this comparison does not give any decisive results, it may however, be said that walling as a factor influencing natural regeneration is not very effective. The enormous initial expenditure and the subsequent cost of maintenance is not therefore justifiable.

(*b*) Ring-counting of yepi trees was made by felling 30 trees in Kamalapuram coupe XVI and measurements are recorded in Appendix X. Annual rings on yepi are very indistinct, and almost invisible in the heartwood and the ring counting cannot be said to be reliable. No definite conclusion can, therefore, be deduced but it may be said that in forty years a girth of 16 inches to 18 inches over bark is obtained, with heartwood to about half its thickness. This is the size that is most suitable for fuel.

(*c*) Observations on 51 trees in Kamalapuram Coupe XVI were made in December 1927, to see at what girth, yepi becomes unsound. These are recorded in Appendix XI. The soil of Kamalapuram may be taken as the average. The result of observations shows that trees of more than 2 feet in girth generally get unsound. Even in the best soil of Yerramalais 3 feet is probably the maximum that a yepi tree can be allowed to grow without becoming unsound.

PART II.

Future Management discussed and prescribed.

CHAPTER I.—BASIS OF PROPOSALS.

29. *General objects of management.*—The object of the present plan is—

(1) to improve the quality of the present crop in the Yerramalais;

(2) to supplement the existing growing stock by artificial sowings (*rab* sowings) in blanks after felling;

(3) to meet the local demand for fuel, small timber and grazing;

(4) to provide for the extraction of yepi fibre to a limited extent;

(5) to provide for the systematic working of palmyra topes;

(6) to work the other items of produce for revenue; and

(7) to introduce sandal wherever possible.

30. *Working circles, their area and distribution.*—The whole tract dealt with is divided into the following working circles :—

(1) Fuel Working Circle,

(2) Fibre Working Circle,

(3) Palmyra Working Circle,

(4) Minor Forest Produce Working Circle,

(5) Grazing Working Circle,

(6) Sandal Regeneration Working Circle,

(7) Veldurti Babul Working Circle.

A list of working circles with their area is given in Appendix XII.

31. *Period of the plan.*—This working plan will be revised at the end of ten years in the light of experience gained.

CHAPTER II.—FUEL WORKING CIRCLE.

32. *Area dealt with.*—The working circle has an aggregate area of 34,938·64 acres and covers the following thirteen reserves :—

(1) Woddaman.

(2) Gadidamadugu.

(3) Yaperlapad.

(4) Lanjabanda.

(5) Bethamcherla.

(6) Gani.

(7) Panyam.

(8) South Dhone.

(9) North Dhone.

(10) Kamalapuram.

(11) Madhavaram.

(12) Jaladurgam.

(13) Oddapalle.

C.C.'s Ref No. 9114-32-Cl dated 9-11-32.

The following amendment is issued to the Revised Working Plan for the Yerramalais in the Kurnool west Forest division sanctioned in C.C.P. No. 424 Press d. 3-10-1931;-

Page 8 of the Working Plan - Para 34: Delete the full stop at the end of the last sentence and add "except in Kommamarri felling series where the system of simple coppice will be adopted.

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C.K.G. 24-11-32.

33. *Felling series.*—There are twelve felling series in this working circle and each is divided into 40 annual coupes Particulars regarding the felling series are given below :—

Statement of Reserves included in he Fuel Working Circle.

Name of range.	Serial number and name of reserved forest.	Area.	Area included in the felling series.	Serial number and name of the felling series.	Area of the felling series.
		ACS.	ACS.		ACS.
Kurnool ..	1. Gadidamadugu	4,345·00	1,484·80	1. Woddaman	2,566·80
	2. Woddaman	1,283·00	1,082·00		
	3. Yaperlapad	7,346·00	4,398·80	2. Yaperlapad	4,398·80
	4. Lanjabanda	3,950·00	2,937·40	3. Lanjabanda	2,937·40
	5. Bethamcherla ..	9,245·00	3,554·40	4. Bethamcherla ..	3,554·40
			2,592·60	5. Bethemcherla reserve series	2,592·60
	6. Paniem	23,271·75	1,998·40	6. Thammarajupalli ..	1,998·40
	7. Gani	44,405·00	1,672·80	7. Gani	1,672·80
Dhone ..	8. North Dhone	14,436·00	6,638·00	8. North Dhone	3,216·00
	9. Kamalapuram ..	1,880·00	1,046·00	9. Kamalapuram ..	3,422·00
	10. South Dhone	7,049·00	3,832·44	10. South Dhone	4,873·44
	11. Madhavaram	5,889·00	1,822·00	11. Jaladurgam	2,495·00
	12. Jaladurgam	16,814·60	673·00		
			905·00		
	13. Oddepalli	1,313·00	306·00	12. Kommamarri	1,211·00

34. *Method of treatment.*—Yepi, in order to be useful as timber, should be at least 4 feet in girth. But before it attains this girth it becomes unsound. The object of management is therefore only production of fuel and small timber for agricultural implements and house-building purposes. The method of treatment adopted is "coppice with standards."

35. *Rotation.*—As no reliable data are available to fix the rotation with great accuracy the rotation of forty years hitherto adopted will continue to be in force. Observations made in coupes, worked in the past, show that at the end of this period the coppice shoots attain a girth of about 18 to 24 inches, which is the most suitable size for fuel, while ring-counting shows that there is practically no heartwood even in trees of 12 inches girth and that in trees of 18 inches girth the heartwood is about 2½ inches in diameter on the average. Unless the heartwood is at least 5 inches, in diameter, yepi is not useful as timber. The standards will therefore have to be retained for two rotations, at the end of which period it is expected that they would attain about 3 feet in girth with heartwood of about 5 to 6 inches in diameter, and will just be useful as small timber.

36. *Mode of executing the fellings.*—Before the end of December the coupe of the succeeding year shall be surveyed and demarcated by natural features wherever possible or by 12 feet cut lines. It shall further be subdivided into four or five strips by natural features. Each year one coupe in each series will be worked. The strip lines and the new coupe lines should be cut sufficiently wide so as to yield an indicator area of 1 to 2 acres in each coupe, and the resulting produce reported to the District Forest Officers, while submitting the sketch of the coupe.

37. *Standard marking*—(*a*) *Selection of standards.*—Healthy and well formed trees of *Hardwickia binata* if possible at least 20 per acre, should be marked for retention as standards by an officer not below the rank of a forester. At least about 20 per cent of the marking being checked by the ranger. The growth in some of the felling areas is so poor that it will not be possible to find even five healthy and well-formed trees in an acre. In such cases the minimum of 20 per acre may be made good by selecting the best out of the unsound ones and trees of other species. In the absence of yepi trees, nallamaddi (*Terminalia tomentosa*), yegi (*Pterocarpus Marsupium*) and Chiruman (*Anogeissus latifolia*) should be marked. The standards should, as far as possible, be evenly distributed, throughout the area. If a blank occurs, or when the trees selected as standards are too young to yield good seed, a tree though old and badly formed, may be retained, if it will fulfil the purpose of a seed-bearer.

(*b*) *Method of marking.*—Each standard should be marked with a ring of tar at a height of 4 feet 6 inches from the base and above this on the eastern side, a square blaze should be made (a deep cut is not to be made—merely the bark is to be pared down so that a number can be inscribed.) The serial number of the standard should be marked with tar. In addition to the above, the number will be painted on the nearest embedded stone or in the absence of such a stone on a peg.

Simultaneously with standard marking all climbers found on the standards shall be cut back.

38. *Standard register.*—A register of standards showing the number, species, and the girth over bark at breast height shall be maintained. An abstract of the standards for each species should also be made and recorded in the register. Soon after standard marking is over the Range Officer should check at least 20 per cent of them and certify to that effect, in the register itself, in addition to initialling against each standard so checked. At the close of the contract the standards should be checked with reference to the standard register; the Range Officer should check at least 20 per cent on this occasion also and certify to that effect in the standard register.

39. *Mode of felling and extraction.*—Fellings by the contractor shall be regulated according to the terms of the agreement (copy enclosed in Appendix XIII) now in force. The following clauses will be added to it :—

(1) All soft wooded species, such as *Dalbergia paniculata,* will be cut at some height and the bark peeled off.

(2) No minor forest produce yielding trees like mushti, usirika, velaga and chinta, shall be felled whether it is marked for retention or not. However large tamarind trees, etc., which are very old need not be retained, as the space covered by them may be better utilized for the production of wood.

(3) Correct monthly accounts should be obtained from the contractor in the form shown in Appendix XIV.

40. *Tabular statement of fellings.*—A tabular statement of fellings is given below. Each annual coupe is clearly marked on the plan with its area, and coupes shall be leased as shown therein. As far as possible each coupe shall be adjacent to the one worked in the previous year. Areas felled in accordance with the prescriptions of the old working plan and the year of felling are shown in the plan. They should not be worked till forty years have elapsed since the previous working. When there is no demand for a coupe in any felling series it will automatically be closed. When and where demand arises, the District Forest Officer will be at liberty to start felling provided he anticipates a sequence for five years' continuous working. Every year a coupe in each felling series is to be put up for sale. If it is not sold it may be assumed that there is no demand.

Tabular statement of fellings—Yerramalai Fuel Working Circle.

Name of series, coupe number and area in acres.

Year of felling.	Woddaman fuel series (Kurnool range). Coupe number.	Area.	Yaperlapad fuel series (Kurnool range). Coupe number.	Area.	Lanjabanda fuel series (Kurnool range). Coupe number.	Area.	Betamcherla reserve fuel series (Kurnool range). Coupe number.	Area.	Betamcherla fuel series (Kurnool range). Coupe number.	Area.	Tammarajupalli fuel series (Kurnool range). Coupe number.	Area.
1928–29 ..	..	..	..	..	..	..	..	..	..	..	..	..
1929–30 ..	..	..	..	..	1	..	..	..	1	74·0	..	..
1930–31 ..	1	66·0	12	81·0	2	81·0	1	·72	2	83·8	1	47·0
1931–32 ..	2	60·6	13	89·7	3	97·0	2	34·8	3	96·0	2	39·2
1932–33 ..	3	67·0	14	116·8	4	89·4	3	65·6	4	100·0	3	46·8
1933–34 ..	4	61·0	15	99·2	5	91·2	4	60·0	5	88·0	4	38·0
1934–35 ..	5	66·6	16	84·8	6	67·2	5	70·0	6	88·0	5	38·0
1935–36 ..	6	67·5	17	115·2	7	64·0	6	84·0	7	92·0	6	54·4
1936–37 ..	7	67·0	18	86·4	8	72·0	7	80·0	8	96·0	7	40·0
1937–38 ..	8	56·4	19	83·2	9	72·0	8	68·0	9	92·0	8	38·4
1938–39 ..	9	69·0	20	68·8	10	64·0	9	68·0	10	105·6	9	54·4
1939–40 ..	10	73·5	21	84·8	11	70·4	10	51·2	11	96·0	10	38·4
1940–41 ..	11	75·5	22	84·8	12	64·0	11	62·0	12	90·4	11	44·0
1941–42 ..	12	64·5	23	83·2	13	72·0	12	70·0	13	88·0	12	52·0
1942–43 ..	13	61·5	24	99·2	14	80·0	13	64·0	14	101·2	13	55·2
1943–44 ..	14	57·4	25	67·2	15	67·2	14	60·0	15	92·0	14	42·4
1944–45 ..	15	47·1	26	84·8	16	48·0	15	56·0	16	94·0	15	45·6
1945–46 ..	16	60·6	27	86·4	17	67·2	16	60·0	17	88·0	16	48·0
1946–47 ..	17	53·4	28	84·8	18	64·0	17	61·6	18	88·0	17	42·4
1947–48 ..	18	65·6	29	68·8	19	75·2	18	57·6	19	83·8	18	45·6
1948–49 ..	19	62·4	30	70·4	20	72·0	19	56·0	20	92·0	19	52·8
1949–50 ..	20	65·6	31	88·0	21	80·0	20	56·0	21	92·0	20	52·0
1950–51 ..	21	62·0	32	86·4	22	64·0	21	61·6	22	94·0	21	44·0
1951–52 ..	22	72·0	33	100·8	23	72·0	22	54·8	23	84·0	22	72·0
1952–53 ..	23	64·0	34	102·4	24	72·0	23	62·0	24	84·0	23	62·0
1953–54 ..	24	62·4	35	116·2	25	72·0	24	98·4	25	84·0	24	72·0
1954–55 ..	25	60·0	36	78·4	26	73·6	25	66·0	26	72·0	25	66·0
1955–56 ..	26	62·0	37	84·0	27	72·0	26	66·0	27	76·0	26	49·6
1956–57 ..	27	65·6	38	108·0	28	80·0	27	86·0	28	78·0	27	50·0
1957–58 ..	28	64·0	39	86·4	29	84·8	28	42·0	29	88·0	28	49·2
1958–59 ..	29	68·0	40	115·2	30	80·0	29	52·0	30	80·0	29	46·8
1959–60 ..	30	69·2	1	195·2	31	80·0	30	80·0	31	92·0	30	52·0
1960–61 ..	31	64·0	2	177·6	32	81·6	31	98·0	32	85·6	31	58·0
1961–62 ..	32	52·0	3	145·6	33	72·0	32	56·0	33	80·0	32	52·0
1962–63 ..	33	62·0	4	198·4	34	112·0	33	62·8	34	85·6	33	50·4
1963–64 ..	34	68.0	5	214·4	35	64·0	34	52·0	35	86·0	34	58·0
1964–65 ..	35	66·0	6	172·8	36	73·6	35	52·0	36	114·4	35	48·8
1965–66 ..	36	62·0	7	136·0	37	72·0	36	70·0	37	82·0	36	52·0
1966–67 ..	37	64·0	8	150·0	38	72·0	37	56·0	38	104·4	37	50·4
1967–68 ..	38	66·4	9	160·0	39	59·2	38	64·0	39	98·4	38	44·4
1968–69 ..	39	65·6	10	106·0	40	88·0	39	74·0	40	82·4	39	49·2
1969–70 ..	40	77·0	11	119·0	..	72·0	40	66·8	..	..	40	52·0

Year of felling.	Gani fuel series (Kurnool range). Coupe number.	Area. (ACS.)	Kamalapuram fuel series (Dhone range). Coupe number.	Area. (ACS.)	North Dhone fuel series (Dhone range). Coupe number.	Area. (ACS.)	South Dhone fuel series (Dhone range). Coupe number.	Area. (ACS.)	Jaladurgam fuel series (Dhone range). Coupe number.	Area. (ACS.)	Kommamari fuel series. Coupe number.	Area. (ACS.)
1928–29	..	..	..	..	1	150·0	..	..	..	..	1	30·0
1929–30	..	..	1	75·0	2	186·0	1	100·0	5	69·0	2	30·0
1930–31	1	52·0	2	1,175·0	3	100·0	2	61·0	6	60·0	3	40·0
1931–32	2	44·0	3	117·6	4	100·0	3	99·0	7	65·0	4	30·0
1932–33	3	48·0	4	76·0	5	85·0	4	100·0	8	60·0	5	25·0
1933–34	4	48·0	5	82·0	6	85·0	5	96·0	9	60·0	6	30·0
1934–35	5	40·0	6	82·0	7	88·0	6	96·0	10	50·0	7	30·0
1935–36	6	46·0	7	78·0	8	90·0	7	97·0	11	55·0	8	30·0
1936–37	7	50·0	8	75·0	9	90·0	8	96·0	12	55·0	9	30·0
1937–38	8	48·0	9	83·0	10	80·0	9	98·0	13	75·0	10	30·0
1938–39	9	48·0	10	78·0	11	85·0	10	96·0	14	75·0	11	30·0
1939–40	10	47·6	11	80·0	12	83·0	11	100·0	15	70·0	12	30·0
1940–41	11	46·4	12	93·0	13	83·0	12	96·0	16	75·0	13	30·0
1941–42	12	34·4	13	80·0	14	70·0	13	96·0	17	60·0	14	30·0
1942–43	13	44·0	14	80·0	15	77·0	14	100·0	18	60·0	15	30·0
1943–44	14	44·0	15	82·0	16	70·0	15	98·0	19	55·0	16	30·0
1944–45	15	34·4	16	83·0	17	80·0	16	96·0	20	60·0	17	30·0
1945–46	16	34·0	17	80·0	18	88·0	17	96·0	21	55·0	18	30·0
1946–47	17	44·0	18	77·0	19	76·0	18	96·0	22	60·0	19	30·0
1947–48	18	45·6	19	80·0	20	75·0	19	96·0	23	60·0	20	30·0
1948–49	19	36·0	20	81·0	21	87·0	20	186·6	24	60·0	21	30·0
1949–50	20	35·2	21	80·0	22	100·0	21	186·66	25	60·0	22	30·0
1950–51	21	42·8	22	82·0	23	83·0	22	186·66	26	60·0	23	30·0
1951–52	22	37·6	23	84·0	24	87·0	23	186·66	27	60·0	24	30·0
1952–53	23	36·0	24	78·0	25	76·0	24	186·66	28	60·0	25	30·0
1953–54	24	36·0	25	75·0	26	76·0	25	186·66	29	60·0	26	30·0
1954–55	25	40·0	26	78·0	27	83·0	26	142·0	30	60·0	27	30·0
1955–56	26	40·0	27	75·0	28	85·0	27	138·0	31	60·0	28	30·0
1956–57	27	34·4	28	77·0	29	84·0	28	155·0	32	60·0	29	30·0
1957–58	28	48·0	29	77·0	30	70·0	29	186·0	33	52·0	30	30·0
1958–59	29	45·6	30	70·0	31	78·0	30	200·0	34	60·0	31	32·0
1959–60	30	36·0	31	70·0	32	80·0	31	181·0	35	70·0	32	32·0
1960–61	31	42·4	32	85·0	33	78·0	32	152·0	36	70·0	33	30·0
1961–62	32	44·4	33	88·0	34	70·0	33	180·0	37	70·0	34	30·0
1962–63	33	48·0	34	98·0	35	80·0	34	164·0	38	70·0	35	32·0
1963–64	34	34·0	35	77·0	36	80·0	35	95·0	39	70·0	36	30·0
1964–65	35	40·0	36	90·0	37	88·0	36	95·0	40	60·0	37	30·0
1965–66	36	42.0	37	84·0	38	84·0	37	90·0	1	71·0	38	30·0
1966–67	37	40·0	38	88·0	39	83·0	38	85·0	2	55·0	39	30·0
1967–68	38	45·0	39	75·0	40	85·0	39	85·0	3	65·0	40	30·0
1968–69	39	38·0	40	75·0	..	..	40	95·0	4	72·0	..	..
1969–70	40	36·8	..	..	..	..	..	..	..	..	..	..

41. *Subsidiary sylvicultural regulations.*—As work is in progress in the coupe the Range Officer should select suitable patches, where soil is found and heap thereon sufficient debris to make compact heaps not less than $10' \times 10' \times 6'$. As the Yerramalais are mostly rocky it is not likely that many such heaps can be formed in a coupe; and it should be possible for the ranger to get the work done departmentally on a sanctioned estimate. These heaps shall be burnt early in January. If necessary, a second burning may be done in February to reduce the entire heap to ashes. In April good seeds of timber species, indigenous to the locality such as *Hardwickia binata, Anogeissus latifolia, Chloroxylon sweitenia,* should be sown in these patches after mixing the resulting ash thoroughly with the soil. For this purpose sufficient stock of good seeds should be collected before April, through the subordinates. In addition to the indigenous species others like *Cassia siamea* and *Prosopis juliflora* might be tried experimentally. The Forest Research Officer who has experimented with them in dry areas shall be asked to advise and to supply seed in this connexion. The sown patches should be staked, numbered, and a record of the operations should be made in a journal to be maintained for the purpose both in the District Forest office and the Range office. The expenditure on these operations is estimated to come to about 8 annas per acre.

42. *Other regulations*—(1) *Grazing.*—It is believed from observations made on felled coupes that the closure of a coupe to grazing for a period of ten years after felling would be enough to ensure and safeguard regeneration. Felled coupes, except those walled in and permanently closed to grazing, will therefore be closed only for ten years, including the year of felling. In view however of the general overgrazing in the forest it will be for consideration, when the plan is next revised, whether grazing should not be excluded altogether.

The fallen portions of the stone wall should be repaired and kept in good condition.

43. *Fire-protection.*—The growth of grass in the Yerramalais is neither thick nor tall. Therefore all that is necessary is that the felled coupes, during the period they are closed to grazing, should be rigidly fire-protected by early-burning their periphery.

44. *Collection and record of statistics.*—With a view to find out the effect of early-burning on yepi seedling regeneration, the following experiments will be carried out in Yaperlapad and carefully recorded in the journal. Three half-acre plots in a representative locality containing yepi seedlings will be laid out. One plot shall be early-burnt in January and the yepi seedlings cut back. The second plot shall be early-burnt but the seedlings not cut back. No early-burning will be done in the third plot nor seedlings cut back. All plots will be fire-protected rigidly and closed to grazing. The observations will be recorded in the following form. But the possibility of the adoption of better methods of experimenting, or recording, should be taken up by the Conservator with the sylviculturist :—

Surviving Yepi seedlings.						Record of subsequent observation in the year.				Remarks.
Early burnt and cut back. / Early burnt and not cut back. / Not early burnt and not cut back.					Seedlings at the beginning of the experiment and their condition.	July.		December.		
Year.	Early burning.	Cut back on.	Number of seedlings counted (serially numbered) in the plot.	Average height of the seedlings (worked out from individual measurement including height of the highest).	Remarks on the health and growth conditions of seedlings just before the operation each year.	Number of survivals.	Health and growth condition, etc.	Number of survivals.	Health and growth condition, etc.	Seedlings refer to Yepi between 1 foot and 3 feet in height.

CHAPTER III.—YEPI FIBRE WORKING CIRCLE.

45. *Area dealt with.*—Areas containing old yepi, mostly pollarded in the past, in the North Dhone, Lanjabanda, Betamcherla, and Jaladurgam reserves are included in this working circle. Its aggregate area is 6,830·40 acres. The statement in paragraph 50 gives details of reserves, included, area of each series and area of each coupe.

46. *Constitution of the working circle.*—The working circle is divided into four felling series :—Two in Dhone range and two in Kurnool range and each series is divided into five annual compartments.

47. *Method of treatment.*—Old yepi trees over 4 feet in girth which have no future before them will be pollarded and fibre removed from them.

48. *Rotation.*—For extraction of yepi fibre the best size of shoots is 6 inches to 12 inches in girth at the base of the branch. It has been found by ring-counting that a pollarded shoot reaches this girth in about five years. A rotation of five years is therefore fixed.

49. *Mode of execution of the fellings.*—Before the end of December the coupe of the succeeding year shall be surveyed and demarcated by natural features wherever possible or by 12 feet wide cut lines. It shall further be subdivided into four or five strips by natural features. Early in March the coupe shall be sold in public auction. The coupe shall be worked strip by strip and the contractor shall not proceed to the next strip without the written permission of the Range Officer. Only trees above 4 feet in girth shall be pollarded. In every such tree three to four healthy shoots shall be left to serve as seed-bearers. The cut should be clean and made with a sharp knife.

50. *Tabular statement of fellings.*—Tabular statement of fellings is given below :—

Name of range.	Name of series.	Area in acres.	Name of reserve included.	Serial number and number of coupe.	Area of the coupe in acres.	Year of felling.
Dhone range ..	North Dhone fibre felling series.	1,892	North Dhone ..	1. V	320	1929–30
				2. I	372	1930–31
				3. II	392	1931–32
				4. III	396	1932–33
				5. IV	412	1933–34
	Jaladurgam ..	896	Jaladurgam ..	6. V	224	1929–30
				7. I	192	1930–31
				8. II	192	1931–32
				9. III	160	1932–33
				10. IV	128	1933–34
Kurnool range ..	Lanjabanda felling series.	1,774·4	Lanjabanda ..	11. IV	357·6	1929–30
				12. V	318·4	1930–31
				13. I	376·0	1931–32
				14. II	366·4	1932–33
				15. III	356·0	1933–34
	Betamcherla ..	2,014	Betamcherla ..	16. IV	432	1929–30
				17. I	440	1930–31
				18. II	314	1931–32
				19. III	424	1932–33
				20. IV	404	1933–34

A proper monthly account should be obtained from the lessees in the form given in Appendix XIV.

CHAPTER IV.—PALMYRA WORKING CIRCLE.

51. *Area dealt with.*—The palmyra topes of Alamoor, Bogeswaram and Owk extensions are dealt with. The first two are in Kurnool range and the third in Dhone range.

The Alamoor tope reserve which is 180 acres in extent has a big tank in it. The palmyra-covered area in it is 77 acres; while the area containing babul is 70·05 acres. The Bogeswaram tope consists of the following three patches :—

Edula Sela (34·8 acres);
Rastappa Narayya (13·6 acres);
Puligundla vagu (12·0 acres);

all in Gani reserve.

The area of the Owk extensions reserve is 643 acres of which 320 acres are covered by palmyra. The northern portion of this area is called Moolamatallu, is separated by a low hill from the southern portion called Gonditallu.

52. *Method of treatment.*—In Alamoor and Bogeswaram topes a complete enumeration of all trees 35 feet and above in height was made and the result is given below :—

Number of trees from 35′—40′.	Number of trees from 41′—45′.	Number of trees from 46′—50′.	Number of trees from above 50′.
4,867	3,297	2,226	1,217

This shows that there are about 9 trees, above 50 feet in height per acre. Within the next ten years, all these mature trees will be removed at the rate of 120 trees per annum. Since there are only few trees above 50 feet in height in Bogeswaram topes and since the area in Alamoor tope is small, this area is not divided into blocks.

In Owk extensions reserve sample plot enumerations over ten 1-acre sample plots were carried out, in five feet height classes and the result is given below :—

Number of sample plot.	A. Trees up to 5′.	B. Trees 5′– 10′.	C. Trees 10′—15′.	D. Trees 15′—20′.	E. Trees of and above 20′.	Total.	Mature trees of 50′ and over.	Number of seedlings.
1 ..	33	8	4	10	40	95	20	200
2 ..	42	16	28	25	144	255	50	40
3 ..	34	31	34	39	70	208	20	40
4 ..	28	24	10	10	73	145	14	20
5 ..	31	20	29	28	108	216	39	48
6 ..	40	16	18	5	140	219	45	60
7 ..	10	4	8	4	146	172	46	28
8 ..	18	6	6	.	136	166	67	100
9 ..	19	15	7	4	140	185	60	40
10 ..	20	20	7	4	217	268	64	60
Total for 10 acres.	275	160	151	129	1,214	1,929	425	636
Total for 1 acre.	28	16	15	13	121	193	42	64

The average height which trees in this locality attain is 50 feet. The number of trees per acre above 20 feet is 121. In B, C, and D classes, the average number of trees per acre : $\frac{(16+15+13)}{3} = \frac{44}{3} = 15.$

The number of trees per acre in each of the six classes above 20 feet up to 50 feet may be put down as 121/6 or 20. Palmyra puts forth 1 leaf per month and 12 leaves per year. As the seat of each leaf is marked by a ring round the tree, 12 rings on the stem mean the growth of one year. From measurements taken it was found that that rate of growth per annum is fast till it reaches a height of 30 feet, even 15 inches having been found on some trees and, thereafter, it gradually goes down to 8 inches. Hence the average growth per year up to 30 feet may be safely presumed to be 14 inches and that after 30 feet may be assumed to be 10 inches. It has been ascertained that a palmyra seedling to establish itself takes twenty years. The age of palmyra may be taken as follows :—

	YEARS.
(1) To develop under-ground stem and establish itself	20
(2) To attain a height of 30 feet (360/14).	26
(3) To attain a further height of 20 feet (240/10)	24

The period of transition from one class to another for trees above 30 feet is six years, and the number of trees that will attain exploitable age per annum will be $20/6 = 3\frac{1}{3}$ trees per acre.

The enumeration shows a large predominance of mature and over-mature trees probably due to lack of demand in the past.

Without therefore taking into consideration the increment, there are not less than 42 mature palmyra trees of 50 feet and above in height per acre which may be removed in the next ten years. There are thus 13,020 trees in the whole reserve and the number that may be removed in a year is 651.

Recent inspection of these topes also shows that a large number of palmyra trees are fast dying. It is prescribed therefore that 300 matured palmyra trees will be removed annually. The palmyra area is divided into five blocks and the fellings will be confined to one block each year. If, in any one year, the prescribed number of trees cannot be sold for lack of demand, the deficit in working will not be considered a deviation. All the available dead trees which are not completely useless will also be marked and sold in addition to the living ones in that block.

53. *Mode of executing the fellings.*—In February of every year 120 trees over 50 feet in height in the Alamoor and Bogeswaram topes, and 300 such trees in one compartment in the Owk extension reserve will be auctioned either in one lot or in different lots according to demand. When the sale is confirmed the Range Officer will select the number of trees auctioned in company with the highest bidder, who will be at liberty to select the best trees (above 50 feet in height) he wants. The marking will be done by the Range Officer himself as under :—

(1) The selected trees must have two numbers each on the eastern side, one number above 4 feet from the ground and the other 1 foot from the ground.

(2) The number should be painted on the heartwood inside the bark, which should be removed for this purpose.

(3) Under the number of the tree, the year of felling should also be painted.

(4) To the right of the number the Range Officer's property hammer-mark must be impressed legibly on the tree.

(5) The trees must be felled 6 inches above the lower mark, leaving a stump of $1\frac{1}{2}$ feet high.

(6) The felling must be done very carefully, and in this operation other trees should not be damaged. If damaged, the contractor must pay for them at the same rate as he paid for the trees purchased by him.

(7) When the felling is completed, the Range Officer himself should check the felling and pass the felled timber after affixing his sale hammer-mark on the pieces to be removed and also on the section of the stump concerned. This is very necessary to facilitate detection of theft of palmyra trees under cover of licensed ones.

(8) The Range Officer's first marking of the trees before felling with his property hammer and the marking of the stumps with his sale hammer after felling are very important as they are intended to prevent the contractor from felling other than numbered trees.

(9) The list of trees marked should be maintained in a bound register and in this, the number of the tree, its total height, the height of heartwood should be entered when the Range Officer passes the timber. The register should be carefully preserved and should not be destroyed without orders.

54. *Subsidiary sylvicultural regulations.*—(1) *Alamoor reserve.*—The large mass of young babul which forms the understorey in the Alamoor reserve, is so dense that it renders the extraction of mature palmyra trees and the collection of minor forest produce difficult. Illicit removal of babul for thorns also takes place. To meet this demand and to remove the congestion, it is proposed to conduct annual light thinnings. The babul area was stock-mapped and is divided into ten annual blocks. The blocks with their areas are marked in the sketch. One block each year should be taken up for thinning. The marking for thinning should be done by the Range Officer in person. The fellings should be done departmentally. The resulting fuel should be stacked and sold in public auction along with the thorns obtained.

(2) *Owk extension reserve.*—In the Owk extension reserve, the understorey consists of a dense growth of nim, tamarind, nerudi, mango, kanuga, etc., species. This interferes with the natural regeneration of palmyra and further, this is the

only source of fuel supply to the adjoining villages. This area was stock-mapped and is shown in the sketch. The stock-mapped area is divided into twenty annual blocks. Each block will be sold in public auction and clear-felled leaving of course all palmyras. Six of the blocks have already been worked. A tabular statement of the blocks to be worked annually is given below.

Name of series.	Name of reserved forest.	Coupe number.	Area in acres.	Year of thinnings.	
			ACS.		
Alamoor babul area	Alamoor tope ..	1	9·00	1930–31	
		2	8·00	1931–32	
		3	6·00	1932–33	
		4	6 00	1933–34	
		5	8·05	1934–35	
		6	8·00	1935–36	
		7	6·05	1936–37	
		8	7·00	1937–38	
		9	6·05	1938–39	
		10	6·00	1939–40	
Owk extension fuel area	Owk extension I.	1	15·23	1943–44	Felled during 1923-29.
		2	10·37	1944–45	
		3	15·23	1945–46	
		4	20·00	1946–47	
		5	31·00	1947–48	
		6	30·50	1948–49	
		7	17·50	1929–30	
		8	15·00	1930–31	
		9	21·00	1931–32	
		10	15·00	1932–33	
		11	16·00	1933–34	
		12	16·00	1934–35	
		13	16·00	1935–36	
		14	16 00	1936–37	
		15	16·00	1937–38	
		16	16 00	1938–39	
		17	16·00	1939–40	
		18	15 00	1940–41	
		19	15·00	1941–42	
		20	16·00	1942–43	

55. *Cultural operations.*—There is sufficient natural regeneration and no cultural operations are necessary, but *Euphorbia* and prickly-pear are coming up in the Owk extension reserve. Where interfering, or likely to interfere, with woody growth, the former should be removed by the beat subordinates. The method of eradicating prickly-pear through the agency of the cochineal insect should be adopted on the basis of a definite scheme approved by the Conservator. There are generally two or three different species of prickly-pear in our forests and the cochineal insect is, it is said, inclined to confine itself to the species on which it is first bred. If more than one species occur all should be inoculated.

CHAPTER V.—MINOR FOREST PRODUCE WORKING CIRCLE.

56. *Area dealt with.*—All the reserves and unreserves included in the Kurnool and Dhone ranges come within the purview of this working circle.

57. *Division of the area.*—*Cassia auriculata* (tangedu) bark will be auctioned separately by revenue firkas (list given in Appendix XV). For *Cassia fistula* (rela) bark and *Diospyros Melanoxylon* (tumki) leaves, reserves and unreserves of each range will be taken together as one unit in each case. The right to collect the usufruct of the palmyra topes of Alamoor and Owk extensions reserves will be sold separately. The right to catch fish in the Alamoor tank will also be sold separately. All other items of minor forest produce (list of which is given in Appendix XVI) will be sold in the following convenient units:—

Number and name of farm.	Name of reserve included in the farm.
1. Kurnool farm ...	Woddaman, Gadidamadugu, Yaperlapad, Lanjabanda and its extensions and Betamcherla.
	Paniem, Gani and Alamoor.
2. Dhone farm ...	North Dhone, South Dhone, Kamalapuram and Madhavaram.
3. Jaladurgam farm ...	Jaladurgam and its extensions.
	Nallamekalapalle, Devagudipad, Oddepalli, Peddapaya and Tekkulakonda and its extensions (I) and (II).
4. Owk farm	Owk and its extensions.

58. *Prescription regarding management.*—The lease of tumki leaves will be annual. The new flush is in March and April and picking is usually done in May. The lease will therefore extend from December to 30th June. Tangedu bark will be sold on a two years' lease which will extend from 1st April to the 31st of March of the second year. Rela bark in Kurnool and Dhone ranges will be sold alternately and the lease will extend for one year from 1st April to 31st March. All other items of minor forest produce will be sold annually. The name of unit, the different items of minor forest produce, the date and place of sale, the period of lease and conditions of lease, will be published in the District Gazette sufficiently in advance. A sample notification is enclosed in Appendix XVII. If the District Forest Officer finds it necessary to alter the period of lease, he may do so, with the concurrence of the Conservator.

Normally each unit will be sold separately. But if the District Forest Officer considers it expedient either to club the units or to have biennial or triennial lease for any of the produce he can do so, provided that in the case of the biennial or triennial leases the Conservator's previous approval is obtained.

The District Forest Officer will be at liberty to sell, as a separate unit, any produce which has risen in commercial importance. Similarly he can, at his discretion, include in the general minor forest produce lease, any produce which would otherwise be sold separately, but whose commercial value has gone down.

A correct monthly account should be obtained from the lessee of the description and quantity of each kind of minor forest produce collected by him, in the form given in Appendix XIV.

CHAPTER VI.—GRAZING WORKING CIRCLE.

59. *Area dealt with.*—The whole area dealt with in this working plan is included in this working circle.

60. *Grazing blocks.*—Each range will form a unit of grazing and will be available for grazing on a single permit—vide Government Memorandum No. 2382/28-2, dated 28th January 1929.

61. *Areas closed to grazing.*—Areas stone-walled in the past will remain permanently closed to grazing. All fuel coupes will be closed for ten years after felling including the year of felling. All sandal propagation centres and Veldurti reserves will not be open to grazing. The rest of the entire area of the range will be open to grazing at the rates in force for the time being. A list of areas closed and open to grazing in each reserve is given in Appendix XVIII. Below is given a tabular statement showing reserve-war grazing incidence. It will be seen from it that in the case of 8 reserves the grazing incidence does not even come up to the already low average of 3·61 acres to the cow unit, while in 11 cases there is no grazing at all. In the case of Owk extension the incidence is so low as 0·09 acre per cow unit whereas in the case of Peddapaya, Madhavaram, Lanjabanda, Gadithamadugu and Yaperlapad, the incidence is less than 2 acres per cow unit. The grazing is very unevenly distributed; but it cannot be helped as no foreign cattle graze in these reserves, nor is restricted grazing in the overgrazed reserves possible under G.O. No. 1816, Development, dated 25th October 1929. There are also no other areas which can be made available for the cattle now resorting to the overgrazed reserves. Besides, the rotational block system is not possible as the reserves badly affected are surrounded on all sides by villages. The average area opened to grazing is 143,156 acres which gives a grazing incidence of 3·61 acres per cow-unit, based on the average of cattle admitted into the area dealt with in this working plan during 1928–29 and 1929–30.

62. *Grazing fees.*—The present rates of grazing fees are given below :—

	Non-penta cattle.			Penta cattle.		
	RS.	A.	P.	RS.	A.	P.
Sheep per head	0	4	0	0	8	0
Cows or bulls per head	0	8	0	1	0	0
Buffaloes per head	0	12	0	2	0	0

Grazing incidence in the Yerramalais for 1930–31—Kurnool West division.

Name of reserve forest.	Total area in acres.	Area closed to grazing.	Area available for grazing.	Permits issued for 1930–31.			Total cow units.	Grazing incidence per cow unit.
				Buffaloes.	Sheep.	Cows.		
		ACS.	ACS					
DHONE RANGE.								
Peddapaya	3,366·00	..	3,366·00	164	334	1,569	2,091	1·6
Tekulakonda	715·00	..	715·00	..	..	18	18	39·7
Do. extension No. 1	158·00	..	158·00	..	..	..	..	..
Do. do. No. 2	862·00	..	862·00	..	..	..	..	..
Devagudipadu	2,844·00	1	2,843·00	..	..	..	..	..
Oddepalli	1,313·00	..	1,313·00	..	..	..	..	..
Nallamekalalapalli	683·00	..	683·00	..	..	..	..	..
Jaladurgam	16,815·00	428	16,387·00	373	336	1,712	2,626	6·24
Do. extension	4,108 00	2	4,106·00	..	..	..	..	..
Do. 3, 1 and 2	97 00	..	97·00	..	..	..	..	..
Owk reserve forest	31,853·00	..	31,853·00	..	..	..	..	..
Do. extensions I and II	647·00	166·50	484·50	95	1,928	3,905	5,059	0·09
South Dhone reserve forest	7,049·00	2,375·50	4,673·50	15	1,768	276	1,090	4·3
North do.	14,346·00	1,008·00	13,338 00	138	2,622	1,837	3,424	3·9
Kamalapuram	1,880·00	826·00	1,054·00	..	..	79	79	13·4
Madhavaram	5,889·00	190·00	5,699·00	71	2,556	1,767	3,187	1·8
	72,625·00	4,997 00	87,628·00				16,574	5·3
KURNOOL RANGE.								
Woddaman reserve forest	1,283·00	486·00	797·00	49	..	248	346	2·3
Lanjabanda do	3,950·00	178·00	3,772·00	190	3,076	1,021	2,939	1·3
Do. extension	3,107·50	..	3,107·50	..	..	..	..	..
Bethamcherla	9,245·00	97·00	9,148·00	361	1,820	1,516	3,148	2·9
Veldurti	883·00	..	883·00	..	..	..	..	..
Gadithamadugu	4,345·00	1,831·00	2,514·00	237	725	556	1,382	1·8
Yaperlapad	7,346·00	3,391·00	3,955·00	61	3,002	1,137	2,760	1·4
Gani reserve forest	44,405·00	..	44,405·00	102	5,401	3,302	6,206	7·2
Panyam	23,271·75		23,271·75	229	2,818	2,700	4,367	5·3
Alamoor	180·00	180·00	..	..	..	..	..	..
	98,016·25	6,163·00	91,853·25				21,248	4·32

EXPLANATORY NOTE.—It is to be remembered that a grazing licence admits the cattle to any open reserve in the range. At the time of issue of permits the purchaser is asked where he intends or is accustomed to graze his cattle : this statement does not confine him to grazing his animals in the locality stipulated, but it is on such statement that our statistics are compiled. Thus our information is far from exact. Cattle owners have, for example, declared that they graze generally in the Owk extension reserve, and no one seems to have declared that he would graze in the main Owk reserve. Yet the main Owk reserve is actually frequented by licensed cattle.

63. *Grazing notification.*—Every year prior to the commencement of the grazing season, which begins from 1st April, a notification in the District Gazette, containing the conditions under which grazing is permitted, a list of areas closed to grazing and a list of recognized pentas will be published and vernacular copies thereof will be published in the village and forest sheets of the District Gazette. A sample copy of the notification is given in Appendix XIX (*a*). A list of recognized pentas is given in Appendix XIX (*b*).

CHAPTER VII.—SANDAL PROPAGATION WORKING CIRCLE.

64. *Area dealt with.*—This working circle will consist of a number of plots which might be suitable for introduction of sandalwood by dibbling.

65. *Object of management.*—The object sought to be obtained is to create centres from which the species is expected to be propagated in the rest of the area through natural agencies, such as birds, water, etc.

66. *Selection of propagation centres.*—Patches, about 12 feet in diameter, suitable for the purpose, should be selected yearly in the different beats at the rate of 6 patches per beat, for sandal propagation. There are 16 protective beats in the Kurnool and Dhone ranges, and there will thus be in all 96 such patches for propagation every year.

In selecting sandal plots or propagation centres, care is to be exercised that the plots are so located that it is practicable for the beat subordinates to attend to them without detriment to their protective and other duties and to allow of adequate control by the Ranger and District Forest Officer. When the Conservator is able to state that the methods adopted are successful the number of centres may be increased.

67. In selecting patches for propagation, the importance of the fact that the presence of healthy shrubs within a foot or so of these patches and of vigorous young trees at a distance of from 3 to 6 feet is essential to provide hosts in later years, should not be lost sight of. Care must be taken to impress upon the subordinates the fact that sandal must not be dibbled just a few inches from a host which will develop into a tree. Through lack of intelligence this is very frequently done, with the obvious result that when both are big poles their trunks will be actually touching one another, and the development of both trees will be retarded; 3 to 6 feet from such a host is the minimum distance that sandal should be dibbled.

68. At each patch either sowing in a nursery alongside perennial streams, if such are available or dibbling of seeds in small patches may be done in the manner shown below. But whatever method is adopted it is advisable to sow with the sandal some very easily raised field crop like dholl, which has been found most suitable for the purpose up to date (vide Chief Conservator's Proceedings Mis. No. 547, dated 22nd October 1930). When this is done, the field crop seeds are sown in a circle roughly 2 feet in diameter round the patch of dibbled sandal seed. The dholl may be introduced even when the sandal seeds are dibbled among bushes. Close to streams where water is generally available in summer, on a well-drained locality with slight overhead shade and two seed beds 6 feet × 4 feet may be made leaving in between 4 feet space, the sandal patch being 12 feet square instead of 12 feet in diameter as indicated in paragraph 66 supra. Sandal seeds should be sown on these beds and lightly covered with fine soil. The beds should be watered everyday until germination takes place. Thereafter the seedlings should be watered every other day until the sandal is about 4 inches in height, after which the beds made may be watered once a week, till rains set in, when, any further watering should be discontinued. When water is not available, areas with low thorny bushes may be selected, and the sandal seeds dibbled in the patch, particular attention being paid to the instructions contained in paragraph 67 supra.

69. *Sowing.*—Great care should be taken to get the best seed. The Forest Research Officer may be periodically consulted in the matter of seed collection and supply. Sowing should be done about the middle of May and casualties replaced by a second sowing in August or September. Resowings, when necessary, will be done in the second and third years in the same months.

70. *Tending.*—No tending is considered necessary for the first three years but it will be left to the District Forest Officer, to see that the seedlings have sufficient lateral shelter, and overhead light and are free from creepers.

71. *Protection.*—Each patch should be effectively fenced with thorns to a height of 6 feet to prevent browsing of the seedlings by cattle, and should also be properly fire-traced. The beat subordinates are responsible to see that by proper fencing and fire-tracing their respective propagation centres are effectively protected from grazing and fire and it is the duty of the Range Officer to enforce this responsibility.

72. Each ranger should maintain a sandalwood journal in the form given in Appendix XX to watch the progress of work. Plans showing the location of these centres should be posted in these journals. A copy of the journal should be maintained in the District Forest office and information for the whole division should be posted each year.

73. The whole operation will be done by the subordinates free of cost. Except the cost of the seed and transport no further expenditure will be incurred.

CHAPTER VIII.—VELDURTI BABUL WORKING CIRCLE.

74. *Area dealt with.*—The working circle deals with the entire Veldurti reserves (883 acres in extent). Of this about 131 acres contain almost pure babul (*Acacia arabica*) and the rest of the area consists of miscellaneous scrub and blanks.

75. *Constitution of the working circle.*—As stated in paragraph 22 of Part I, the babul in this area was worked under " coppice with standards " on a 20-year rotation in accordance with the prescription of the 1903 working plan sanctioned in B.P. Forest No. 328, dated 16th December 1903.

It was expected that, at the end of twenty years, the babul would reach 8 inches in diameter which was fixed as the exploitable size. Since babul did not coppice well and had no chance of reaching that diameter even in thirty years, a scheme for giving rest to the congested portions and cultural operations in the area and carrying out thinning operations in the congested areas was sanctioned in 1920. The cultural operations had to be given up in 1927 (vide Second Circle Conservator's M.2. 1586/27, dated 5th August 1927) as they were a failure, but thinning was continued. Though it is now 29 years, since the first coupe was worked, it is found that the majority of trees have not attained the exploitable size as the abstract given below of the complete enumeration of all the trees in coupe 1 (21 acres) made in April 1928 will show.

Result of total enumeration of trees in coupe 1 *of Veldurti reserve felled in* 1920.—

Plot.	Area in acres.	Species.	Below 6″ in girth.	7″—12″.	13″—15″.	16″—18″.	19″—21″.	22″—24″.	Above 24″.	Total.
1. Away from stream towards west.	8·5	Babul.	378	113	24	35	7	3	2	562
		Other species.	..	20	3	13	1	6	5	48
2. Close to river on both sides.	7·5	Babul.	261	198	92	90	33	48	55	777
		Other species.	..	5	1	4	1	2	3	16
3. Away from stream towards east.	5·0	Babul.	98	18	13	4	1	1	1	136
		Other species.	..	12	1	..	..	..	..	13
Total ..	21·0		737	366	134	146	43	60	66	1,552
Number of trees per acre.	1		35	18	6	7	2	3	3	74

It can be seen from the above statement that there is a large percentage of saplings. Since the crop as a whole has not attained the exploitable size, it will be given rest for the next ten years. During this period the dense babul growth will be thinned and dead and dying trees will be extracted.

76. *Method of working.*—The babul area of 131 acres where it is considered that thinning is necessary is stock-mapped and divided into ten approximately equal blocks as shown in the sketch; one coupe block will be taken up each year; the statement given below shows the area to be thinned and the year of thinning. Marking for felling will be done by the Range Officer in person. Fellings should be conducted departmentally and the resultant fuel should be billetted, stacked and sold. The thorns should be utilized for fencing the sandalwood propagation centres. All dead and wind-fallen trees and old standards 1 foot and over in diameter, which have served their purpose and are standing over young growth, should be marked and extracted at the time of thinning.

77. *Cultural operations.*—With a view to find out how far the method of regenerating babul areas adopted in the Guntur district can be applied to the Veldurti reserve, the District Forest Officer will select in a suitable locality within the reserve, an area, 5 to 10 acres in extent, in which babul will be introduced artificially on the lines which are said to have yielded good results in the Guntur district. Particulars of this method of regeneration will be found in the District Forest Officer's file of Yerramalai Working Plan.

78. Statement showing thinnings to be made in the babul area of Veldurti reserve forest—

Block number.	Area in acres.	Year of thinning.	Block number.	Area in acres.	Year of thinning.
1 ...	11·5	1930–31	6 ...	11·0	1935–36
2 ...	12·5	1931–32	7 ...	10·0	1936–37
3 ...	13·0	1932–33	8 ...	13·5	1937–38
4 ...	12·5	1933–34	9 ...	12·5	1938–39
5 ...	18·5	1934–35	10 ...	6·0	1939–40

CHAPTER IX.—PRESCRIPTIONS COMMON TO ALL WORKING CIRCLES.

79. *Miscellaneous regulations.*—(1) In the Fuel and Fibre Working Circles the worked coupes should be demarcated at their corners by cutstones 3 feet long 15 inches wide and 3 inches thick with the number of the coupe and the year of felling chiselled on them as shown below. The fuel coupe will be differentiated from the fibre coupe by the words fuel and fibre respectively as shown below :—

Fuel coupe.	
I	II
1930–31.	1931–32.

Fibre coupe	
	II
1930–31.	1931–32.

(2) Charcoal burning in the coupe under working, will be permitted in sites approved by the Range Officer.

(3) To ensure proper supply of fuel, small timber and agricultural implements to the local population, at reasonable rates, a condition should be inserted as per G.O. Mis. No. 340, dated 9th March 1927, communicated in Chief Conservator's Proceedings Mis. No. 101, dated 15th March 1927, in the agreements binding the contractors to sell the required material for *bona fide* domestic use to the ryots at rates advertised by the District Forest Officer, in the District Gazette from time to time. A sample statement showing the rate at which the lessees are bound to sell at the edge of coupe is given in Appendix XXI.

80. *Fire maps.*—A set of fire maps (4″=1 mile) and a fire register will be maintained for the working plan area, in which burnt areas will be posted annually.

81. *Roads and buildings.*—The existing roads and cart-tracks are enough for carting of the produce from the various working circles. No new roads are therefore prescribed.

There is no difficulty in housing the subordinates anywhere in the Yerramalais. The existing buildings will be maintained. A list of the existing buildings is given in Appendix VI. A rest-house at Ramapuram may be constructed when funds are available for the same, to facilitate inspection of Jaladurgam, Madhavaram and Kamalapuram reserved forests.

82. *Establishment and labour.*—No change in the establishment is contemplated.

CHAPTER X.—FINANCIAL FORECAST.

83. *Financial forecast.*—The following is the estimated revenue and expenditure per year for the whole of Yerramalais as based on the actuals of past three years :—

Revenue.

	Amount. RS.	A.	P.
1. Revenue from sale of 12 fuel coupes, 882 acres at Rs. 4–8–0 per acre.	3,970	0	0
2. Revenue from yepi fibre coupes, 4 coupes of 1,209 acres at 8 annas per acre.	600	0	0
3. Revenue from thinnings in Alamur, Veldurti and Owk extension reserves.	400	0	0
4. Revenue from tumki lease, rangedue, rela and other minor forest produces and fish in Alamur tank.	9,340	0	0
5. Revenue from grazing	13,430	0	0
6. Revenue from palmyra trees, 420 trees at Rs. 3–8–0 per tree.	1,470	0	0
7. Revenue from chiselled stones, etc.	70	0	0
8. Revenue from timber from unreserves	5,060	0	0
9. Revenue from fuel from unreserves	3,850	0	0
10. Revenue from minor forest produce from unreserves ...	12,680	0	0
11. Sale of confiscated timber	180	0	0
12. Miscellaneous from other sources	11,200	0	0
13. Rent of buildings	180	0	0
Total ...	62,430	0	0

	Amount.		
	RS.	A.	P.
Expenditure—Ordinary.			
1. Demarcation of 12 fuel coupes and 4 fibre coupes, with cutstones.	42	8	0
2. Laying out 12 fuel coupes, surveying and standard marking.	120	0	0
3. Thinning in Alamur, Veldurti and Owk reserves	60	0	0
4. Laying out 4 fibre coupes and surveying	30	0	0
5. Commission to permit-issuing officers	840	0	0
6. Carting confiscated produce	60	0	0
7. Purchase of stores	10	0	0
8. Repairs to existing roads	Nil.		
9. Repairs to buildings	206	0	0
Organization, improvement and extension of forests.			
10. Regeneration of felled coupes by sowing	440	0	0
11. Fire-protection	39	8	0
12. Repairs to water-sources	100	0	0
13. Repairs to wells	5	0	0
14. Contingencies	200	0	0
15. Rents and taxes	110	0	0
Total ...	2,263	0	0
Capital.			
Total cost of all existing buildings	10,735	0	0
Establishment.			
Cost of District Forest Officer, his office establishment ($\frac{2}{7}$ portion), Range Officers and their establishment, including travelling allowances, etc., and protective staff	20,880	0	0

Profit and loss statement.

	RS.	A.	P.	RS.	A.	P.
Revenue				62,400	0	0
Expenditure—						
Ordinary	2,263	0	0			
Establishment	20,880	0	0			
Interest on capital cost of buildings at 5 per cent.	382	0	0			
Depreciation on capital cost of buildings at 2 per cent.	215	0	0			
Total expenditure ...	23,895	0	0			
				23,895	0	0
Net revenue ...				38,505	0	0

84. *Control books.*—Control books and record of works should be maintained for each working circle as shown in Appendix XXII.

Sandal wood regeneration control records should be maintained as prescribed in paragraph 72 above and in Appendix XX.

85. *Control journal.*—A control journal in the form given in Appendix XXIII should be maintained to record matters of interest pertaining to each working circle separately.

APPENDIX I.

[Paragraph 5.]

Statement showing Rainfall in the Kurnool West Division from 1919 to 1928.

Station.	January to March.	April to June.	July to September.	October to December.	Annual rainfall.
(1)	(2)	(3)	(4)	(5)	(6)
REVENUE STATIONS.					
1919.					
Kurnool	0·62	3·25	12·70	3·66	20·23
Dhone	0·87	4·99	19·80	3·91	29·57
Peapalli	1·18	4·74	18·55	3·11	27·58
Owk	1·35	3·84	19·75	4·48	29·42
1920.					
Kurnool	0·83	1·83	6·39	1·93	10·98
Dhone	0·94	4·29	10·54	0·97	16·74
Peapalli	0·12	5·18	6·51	1·59	13·40
Owk	1·28	3·15	9·95	3·15	17·53
1921.					
Kurnool	0·44	4·20	7·55	5·01	17·20
Dhone	0·15	1·99	7·44	9·58	19·16
Peapalli	0·84	6·71	8·61	9·75	25·91
Owk	0·12	1·81	7·24	6·45	15·62
1922.					
Kurnool	0·55	1·61	5·31	3·60	11·07
Dhone	0·67	1·38	5·17	4·51	11·73
Peapalli	1·28	3·44	5·44	9·84	20·00
Owk	0·66	2·33	5·37	4·62	12·98
1923.					
Kurnool	2·19	4·36	15·74	1·73	24·02
Dhone	3·30	1·95	9·92	0·15	15·32
Peapalli	1·34	1·85	9·63	0·62	13·44
Owk	3·42	5·92	6·83	0·62	16·79
1924.					
Kurnool	..	1·15	12·31	3·56	17·02
Dhone	..	2·05	14·75	3·49	20·29
Peapalli	..	2·05	17·32	1·90	21·27
Owk	..	5·56	10·79	1·67	18·02
1925.					
Kurnool	0·01	5·82	10·45	8·88	25·16
Dhone	..	4·25	9·29	6·99	20·53
Peapalli	..	5·97	8·01	7·89	21·87
Owk	..	8·63	9·35	8·85	26·83
1926.					
Kurnool	1·11	4·48	13·56	0·78	19·93
Dhone	0·57	7·67	7·82	0·14	16·20
Peapalli	1·35	8·20	11·72	0·73	22·00
Owk	1·17	4·58	9·91	0·99	16·65
1927.					
Kurnool	0·04	6·39	15·99	6·20	28·62
Dhone	..	1·69	15·96	6·32	23·97
Peapalli	..	2·77	14·35	7·62	24·74
Owk	..	4·90	15·82	11·73	32·45
1928.					
Kurnool	2·73	5·59	12·60	3·04	23·96
Dhone	2·39	6·54	10·78	5·39	25·10
Peapalli	1·72	5·83	11·16	6·50	25·21
Owk	3·26	5·56	8·47	8·30	25·59

APPENDIX II.

[Paragraph 7.]

List of reserves in the Kurnool and Dhone Ranges included in this Working Plan.

Name of range.	Name of reserve.	Area in acres.	Number and date of Board's Proceedings declaring reserved forests.		
			Number.	Date.	Reserved from
1. Kurnool	1. Gadidamadugu ..	4,345·00	185	1st May 1891 ..	30th April 1891.
	2 Woddamanu ..	1,283·00	141	6th July 1905 ..	1st October 1905.
	3. Yaperlapad ..	7,346·00	87	23rd February 1892 ..	31st March 1892.
	4. Lanjabanda ..	3,950·00	482	19th November 1891.	31st December 1891.
	5. Lanjabanda extension.	3,107·50	6	8th January 1906 ..	1st April 1906.
	6. Bethamcherla ..	9,245·00	555	6th December 1898 ..	15th December 1898.
	7. Paniem and addition.	23,271·75	321 and 161	7th December 1903 and 5th August 1913.	1st March 1904 and 15th September 1913.
	8. Gani	44,405·00	31	17th February 1909 ..	15th April 1909.
	9. Veldurti ..	883·00	467	20th October 1898 ..	1st December 1898
	10. Alamur tope ..	180·00	425	7th October 1899 ..	15th January 1900.
2. Dhone	11. North Dhone ..	14,346·00	28	10th January 1898 ..	1st March 1898.
	12. Kamalapuram ..	1,880·00	54	5th February 1897 ..	31st March 1897.
	13. Madhavaram ..	5,889·00	247	13th December 1904 ..	1st March 1905.
	14. South Dhone ..	7,049·00	81	23rd February 1892 ..	30th April 1892.
	15. Owk	31,853·00	183	2nd September 1904.	15th November 1904.
	16. Owk extension No. I.	643·00	255	29th November 1906.	1st February 1907.
	17. Owk extension No. II.	4·45	144	11th July 1913 ..	1st August 1913.
	18. Oddepalli	1,313·00	85	7th March 1902 ..	15th May 1902.
	19. Devagudipad ..	2,844·28	177	12th June 1902 ..	15th September 1902.
	20. Nallamekalapalle ..	683·00	86	8th March 1902 ..	1st June 1902.
	21. Peddapaya	3,365·67	273	9th July 1897 ..	31st August 1897.
	22. Jaladurgam ..	16,814·60	552	15th December 1897.	15th February 1898.
	23. Jaladurgam extension No. I.	4,108·00	125	30th April 1903 ..	1st August 1903.
	24. Jaladurgam extension No. III.	80·00	56	26th February 1903 ..	15th May 1903.
	25. Jaladurgam additional No. I.	5·46	67	31st March 1914 ..	1st May 1914.
	26. Jaladurgam additional No. II.	12·02	67	Do. ..	Do.
	27. Tekulakonda ..	715·00	316	28th May 1895 ..	1st August 1895.
	28. Tekulakonda extension No. I.	158·00	273	22nd September 1902.	15th December 1902.
	29. Tekulakonda extension No. II.	862·00			
	Total ..	190,641·73	..		

APPENDIX III.

[Paragraph 9.]

Description of each reserve.

Serial number.	Name of reserve.	Area.	Soil, situation, etc.	Description of the growth.	Past working. Area worked.	Yield in	Revenue realized.
		ACS.			ACS.	C. FT.	RS. A.
1	Gadida-madugu.	4,346	Soil is a coarse red sand of fair depth which is better in the eastern than in the western part; near the canal alluvial deposit of black cotton soil is met with. Subsoil consists of quartzite and limestone. It is on the average 10 miles by boat from Kurnool.	The chief growth is Yepi and it is mixed with shrubby growth of *Ixora parviflora*, *Morinda citrifolia*, along the canal bank. *Acacia arabica* is frequent. Yepi in the stone-walled area consists of coppice shoots and some natural seedlings and is fairly evenly distributed except in the northern portion. The rest of the area is almost bare. Regeneration from coppice shoots in the worked area is good. Natural regeneration is fair.	1,775·00	78,142	4,394 0 *
2	Woddaman.	1,283	This is situated to the north-east of and adjoining Gadidamadugu reserve. The Cuddapah-Kurnool canal is on the west and is on the average 14 miles by canal and 16 miles by road from Kurnool. Soil is red loam and laterite. Subsoil consists of limestone. Northern area is hilly and the rest hilly and forest undulating.	The chief growth is Yepi (*Hardwickia binata*) which abounds in the central and southern portions. The northern portion is poor in Yepi and is covered by a sparse growth of *Acacia sundra* and *Anogeissus latifolia*, *Ixora parviflora*, and *Morinda citrifolia* mixed with *Dodonea viscosa*, *Cassia Carissa*, and other shrubs. Regeneration is fair.	120·00	11,655	.. †
3	Yaperlapad.	7,346	This is situated on a long range of hills running parallel to Kurnool-Gooty road and is 13 miles from Kurnool.	*Hardwickia binata* is the chief species and is nearly pure. In the south of the reserve where the growth is poor, *Tectona grandis*, *Anogeissus latifolia*, *Terminalia tomentosa* and other trees are found.	1,355·00	268,800	2,641 8
			The soil is red sandy-loam of considerable depth and is covered with small stones. The subsoil is quartzite and limestone-out scrops occur in some places.	Regeneration by coppice is good. Regeneration by seeds is fair.	No coupes worked.	No coupes worked.	No coupes worked.
4	Lanjabanda.	3,950	This is situated parallel to the Kurnool-Gooty road and is 4 to 5 miles distant from it. Soil is coarse red-loam with stones and rocks. Subsoil is quartzite.	The prevailing species is *Hardwickia binata*. There is a greater preponderance of trees like *Tectona grandis*, *Terminalia tomentosa*, *Anogeissus latifolia*. The western slopes are very bare and covered with a stunted growth of *Albizzia amara* and other species. There generation is fair.			
5	Lanjabanda Extension.	3,107	Situated to the south of Lanjabanda reserve and adjoining it, and is similar to it in soil and sub-soil.	Condition of the crop is poor. The chief growth is *Terminalia tomentosa*, *Albizzia amara* much pollarded and old Yepi (*Hardwickia binata*) *Butea frondosa* with a scattered growth of *Tectona grandis*, most of which is situated towards the north. The growth is better. Shrubs, such as *Carissa corundus*, *Dodonea viscosa*, *Ixora parviflora*, are found. Regeneration is poor.	Do.	Do.	Do.
6	Betham-cherla.	9,245	This is 3 to 4 miles from Bethamcherla Railway station. The western part is nearer to Rangapuram. Soil is red sandy-loam, covered with rocks.	The chief species is *Hardwickia binata*, stunted and badly pollarded with a mixture of *Anogeissus latifolia*, *Morinda tinctoria*, *Terminalia tomentosa* and *Acacia leucophloea*. Regeneration is poor.	Do.	Do.	Do.
7	Paniem ..	23,271	This is situated south of the Gani reserve, Kurnool-Nandyal road runs along its northern boundary to a distance of about 6 miles. The Southern Mahratta Railway passes through its southern portion, east to west. Soil is redsandy loam covered with big boulders of rock. The eastern portion adjoining Paniem village is for the most part a vast sheet of stone devoid of growth; subsoil is quartzite and limestone.	The condition of growth is poor. The chief and predominant species are *Hardwickia binata*, *Albizzia amara* and *Acacia sundra* mixed with *Wrightia tinctoria*, *Soymida febrifuga*, *Diospyros melanoxylon*, *Terminalia belerica*, *Sterculia villosa* and *Moringea* and *Pterogosphermia* (wild). Regeneration is poor.	Do.	Do.	Do.

* The revenue for 1912–13 is not traceable.
† Revenue not available.

Serial number.	Name of reserve.	Area.	Soil, situation, etc.	Description of the growth.	Past working.		
					Area worked.	Yield.	Revenue realized.
		ACS.			ACS.	C. FT.	RS A. P.
8	Gani ..	14,408	It is a long chain of reserve running from west to east to a distance of 18 miles and lies to the north of Paniem reserve and to the east of Kurnool-Nandyal road. The plateau contains good red loam and there are four enclosures in it, the most important of which is that of Pinnapuram ; out crop of sheet rock occurs. Soil and subsoil is similar to Paniem reserve.	Condition and growth of the crop is similar to that in the Paniem reserve.	No coupes worked.	No coupes worked.	No coupes worked.
9	Veldurti ..	883	Situated to the north of Veldurti village within half a mile of it. A greater portion of it formed part of a tank-bed. Soil is loamy-clay.	This is a purely babul area (*Acacia arabica*) which is found along and near streams. Large blanks occur.	184	663$\frac{3}{8}$ tons stacks of fuel.	4,475 0 0
10	Alamoor ..	180	This is situated about 6 miles from Paniem, lies within half a mile to the north of the Paniem-Banganapalle road. Soil is a loamy clay.	This is purely palmyra area with an understorey mostly of *Acacia arabica*. The Alamoor tank is within this reserve. Regeneration of palmyra is good.	No coupes worked.	No coupes worked.	No coupes worked.
			DHONE RANGE.				
11	North Dhone.	14,346	This reserve stretches for a distance south of the Lanjabanda reserve to the Southern Mahratta Railway which runs through the reserve by its southern boundary from east to west. The working series is from $2\frac{1}{2}$ to 6 miles from Dhone Railway Station. The soil is a coarse red-sand of considerable depth and fertility, subsoil is quartzite.	This reserve contains a large and varied growth of trees, such as, *Hardwickia binata*, *Tectona grandis*, *Terminalia tomentosa*, *Anogeissus latifolia*, *Pterocarpus Marsupium*, *Chloroxylon sweitenia*, *Dolichandrone falcata*, etc., mixed with corrundum, etc., shrubs. *Hardwickia binata* is much pollarded in the past. The outer slopes are bare. The regeneration from coppice shoot is good and that from seed is fair.	Do.	Do.	Do.
12	Kamalapuram.	1,880	This lies to the north of Dhone reserve and is about $1\frac{1}{2}$ miles from Malkapuram Railway Station. Soil is as in the North Dhone reserve.	Same as in the North Dhone reserve but not so dense.	930	130,935	2,860 0 0
13	Madhavaram.	5,889	This reserve lies to the north of the Banganapalle-Peapalli road which runs parallel to it. The famine road from Malkapuram Railway Station to Racherla runs through this reserve. It is almost 3 miles from Malkapuram Railway Station. Soil is a coarse red sand of little depth and the ground is covered with big boulders and rocks. The subsoil is quartzite.	The condition of the crop is poor. The predominant species is *Hardwickia binata* and almost all of them are stunted and pollarded. The other species that are found scattered are *Diospyros Chloroxylon*, *Gymnosporia montana*, *Carissa carandus*, *Dodonea viscosa*, etc. Regeneration is very poor.	No coupes worked.	No coupes worked.	No coupes worked.
14	South Dhone.	7,049	This reserve lies to the south of Dhone and is about $1\frac{1}{2}$ miles from it. Dhone-Peapally road runs parallel to it throughout from north-east to south-west. Soil is same as that of North Dhone but surface soil is more rocky.	*Hardwickia binata* is the predominant species but mixed with *Dolichandrone falcata*, *Terminalia tomentosa*, *Soymida febrifuga*, etc. Regeneration by coppice is good and that by seed is fair.	2,129·13	195,966	2,225 8 0
15	Owk and Extension No. II.	31,853·445 (31,857·40)	This is situated about 2 miles from Owk village. The soil changes from place to place from vast sheets of rocks to sandy loam of about 2 inches to 3 inches depth. Subsoil is quartzite. It is a vast sheet of stone (flat topped) intersected by numerous streamlets running from west to east into the Kunderu.	The condition of the crop is very poor. The area of the whole reserve is covered mostly with shrubs such as, *Dodonea viscosa*, *Ixora parviflora*, *Carissa carandus*, etc. Along the valleys and streamlets there are *Tamarindus indica*, *Albizzia amara*, etc., trees of small size. There is water available in this reserve even in summer in pools. Regeneration is very poor.	No coupes worked.	No coupes worked.	No coupes worked.
16	Owk and Extension No. I.	643	This reserve is situated in the south-eastern corner of Owk reserve and adjoins it and is about $1\frac{1}{3}$ miles from Owk village. The soil is fertile loam of good depth.	This is purely a palmyra area with date palm here and there. The undergrowth and the growth on the slopes consists of *Melia indica*, *Dolichandrone falcata*, *Albizzia amara*, *Pongamia glabra*, *Carissa carandus*, and *Wrightia tinctoria*.	Do.	Do.	Do.

Serial number.	Name of reserve.	Area.	Soil, situation, etc.	Description of the growth.	Past working.		
					Area worked.	Yield.	Revenue realized.
		ACS.			ACS.	C. FT.	
17	Oddepalle ..	1,313	Situated to north-east of Kommamari village and about a mile distant. A portion of its southern boundary forms a part of the northern border of Anantapur district. Soil is coarse redsand covered with boulders of varying size. Sub-soil is quartzite.	The growth is poor. The area is partly hilly and partly plains. *Hardwickia binata*, is the chief species mixed with *Anogeissus latifolia*, *Adina cordifolia*, *Dolichandrone falcata*, *Acacia sundra*, *Chloroxylon sweitenia*, etc. Regeneration is poor.	No coupes worked.	No coupes worked.	No coupe worked.
18	Devagudipad.	2,844·28	The whole of the southern boundary of the reserve forms part of the southern border of Anantapur district. Soil is coarse red sand with rocks covering the ground. Sub-soil is quartzite.	The growth is poor. *Hardwickia binata* is the chief growth found mostly in ravinces. There is also *Anogeissus latifolia* and other inferior species, such as, *Wrightia tinctoria*, *Albizzia amara*, *Dolichandrone falcata*, etc. Most of the Yepi is pollarded and stunted. Regeneration is poor.	Do.	Do.	Do.
19	Nallamekalapalle.	683 00	Situated to the north-east of the village of that name. The whole of the eastern boundary forms part of northern border of Anantapur district. Soil and sub-soil same as in Devagudipad.	The growth is poor and is similar to that in Devagudipad reserve. Regeneration is fair.	Do.	Do.	Do.
20	Peddapaya.	3,365·65	Situated to the north of Nallamekalapalle reserve. Soil and sub-soil same as in Devagudipad.	The growth is poor, and is same as in the Nallamekalapalle reserve, but the growth of *Hardwickia* is better. Regeneration is poor.	Do.	Do.	Do.
21	Jaladurgam and its extension No. III.	16,814·6 80 16,894·6	Situated to the south of the Pyapalle-Banganapalle road and almost adjacent to it. Its average distance from Pyapalle village is 10 miles. Soil is red, sandy loam of fair depth changing in some places to very white sand. The surface is covered with boulders. Sub-soil is quartzite and limestone.	The chief growth throughout the reserve is *Hardwickia binata*, most of it is stunted and pollarded. *Anogeissus latifolia*, *Dolichandrone falcata*, *Acacia sundra*, etc., are found. Regeneration fair.	Do.	Do.	Do.
22	Jaladurgam and extension No. I.	4,108	Situated to the east of Jaladurgam reserve and near to Garladinne village. Soil in the hills and slopes is red-sand with boulders covering the ground. There is alluvial deposit in the plains.	Condition of crop and regeneration similar to Jaladurgam reserve.	Do.	Do.	Do.
23	Tekulakonda and extensions Nos. I and II.	715 158 862 1,735	Situated to the south-west of Gudipad village and south of Peapally Extension I. Full of rocks and hills. Soil very poor and of coarse red sand with boulders on the surface. Sub-soil quartzite and lime stone.	Condition of the crop very poor. The tops of hills contain a stunted and crooked growth of teak mixed with *Terminalia tomentosa*. The ravines contain *Acacia sundra*, *Acacia leucophlea* and *Albizzia amara*. shrubs such as, *Carissa carandus*, *Randia dumetorum* and *Dodonea viscosa* are found. Regeneration very poor.	Do.	Do.	Do.

APPENDIX IV.

[Paragraph 10.]

List of Trees found in the Yerramalais.

Botanical name.	Vernacular name (Telugu).	Botanical name.	Vernacular name (Telugu).
Hardwickia binata	Yepi.	Diospyros melanoxylon	Tumki.
Tectona grandis	Teku.	Sapindus emarginatus	Kunkudu.
Acacia sundra	Sandra.	Dalbergia latifolia	Jittegi.
Tamrindus indica	Chinta.	Pterocarpus Marsupium	Yegi.
Chloroxylon swietenia	Billudu.		

1st class trees.

Terminalia tomentosa	Nallamaddi.	Melia indica	Vepa.
Terminalia Arjuna	Tellamaddi.	Adina cordifolia	Rudraganapa.
Soymida febrifuga	Somi.	Lagerstrœmia parviflora	Chenangi.
Stephegyne parvifolia	Battaganappu.		

2nd class trees.

Acacia leucophloea	Tellatumma.	Eugenia jambolana	Neredu.
Albizzia lebbek	Dirisana.	Grewia tiliæfolia	Jana.
Albizzia odoratissima	Chinduga.	Pongamia glabra	Kanuga.
Anogeissus latifolia	Chiruman or Yelama.	Strychnos Nuxvomica	Mushti.
		Strychnos potatorum	Chilla.
Cassia Fistula	Rela.		

3rd class trees.

Acacia arabica	Nallatumma.	Morinda tinctoria	Maddi.
Terminalia belerica	Tandra.	Sterculia urens	Yerrapoliki.
Albizzia amara	Chigura.	Wrightia tinctoria	Polavareni.
Butea frondosa	Moduga.	Alangium lamarchii	Uduga.
Boswellia serrata	Anduga.	Bauhinia racemosa	Are.
Mimusops hexandra	Nerumi.	Erythroxylon monogynum.	Devadaru.
Dalbergia paniculata	Pachara.	Dichrostachys cinerea	Velturu.
Diospyros chloroxylon	Ulinda.	Zizyphus xylopyra	Gotika.
Dolichandrone falcata	Niroodi.	Zizyphus jujuba	Regu.
Ficus glomerata	Medi.	Gardenia gummifera	Bikki.
Holoptelea integrifolia	Tavisi.	Mimusops hexandra	Iriti.
Ficus isiela	Juvi.	Vitex altissima	Nemchiadugu.

List of shrubs occurring in the area.

Anamitra cocains	Kakmari.	Euphorbia antiquorum	Bonthajammudu.
Cassia auriculata	Tangedu.		
Carissa carandas	Kalivi.	Randia texterosperma	Konda Mangan.
Canthium parviflorum	Balusu.	Euphorbia Tirukalli	Jammudu.
Dodonea viscosa	Bandari.	Gymnosporia montana	Dente.
Ixora parviflora	Gorivi.	Ochna squarrosa	Pokoa.
Randia dumetorum	Manga.	Vitex Negundo	Vayila.
		Mimosa rubicaulis	Undra.

List of climbers occurring in the area.

Combreturm ovalifolium	Yadatiga.	Pterolobium indicum	Korinda tiga.
Tinospora cordifolia	Tippa tiga.	Zizyphus ænoplia	Poriik.
Ichnocarpus frutescens	Nalla tiga.		

APPENDIX V.

[Paragraph 17.]

Distribution of Establishment of Kurnool and Dhone Ranges (Paragraph 17).

Name of reserve.	Total area in acres.	Beat: Serial number and names of beats.	Beat: Area in square miles.	Beat: Headquarters.	Section: Serial number and name	Section: Area.	Section: Headquarters.	Total Establishment: Foresters.	Total Establishment: Forest guards.	Total Establishment: Forest watchers.
KURNOOL RANGE.	ACS.		SQ. MILES.			SQ. MILES.				
Yaperlapad	7,346	1. Yaperlapad	11·48	Yaperlapad	1. Yaperlapad	20·27	....	..	1	1
Vaddamanu and Gadithamadugu	5,628	2. Gadithamadugu ..	8·79	Gadithamadugu ..	....	..	....	..	1	1
Gani, Paniem and Alamur Reserves	67,856·75	1. Paniem	28·28	Paniem	2. Paniem	106·02	Paniem	1	1	1
		2. Gani	20·80	Gani	....	..	....	..	1	1
		3. Somayazulapalli ..	25·38	Somayazulapalli ..	....	..	....	..	1	1
		4. Thammarajupalli ..	31·56	Thammarajupalli ..	....	..	....	..	1	1
Bethamcherla, Lanjabanda and Extension reserves, Veldurti.	9,245	1. Bethamcherla	14·44	Bethamcherla	3. Bethamcherla ..	26·85	Bethamcherla ..	1	1	1
	7,057·50	2. Lanjabanda	11·03	Lanjabanda	....	..	....	..	1	1
	883	3. Veldurti	1·38	Veldurti	....	..	....	..	1	..
DHONE RANGE.										
North Dhone, Kamalapuram ; South Dhone and Madhavaram Reserve Forests.	29,164	1. Malkapuram	16·02	Malkapuram	1. Malkapuram ..	45·58	....	..	1	1
		2. Dhone	9·34	Dhone	....	..	....	..	1	1
		3. Chintalapeta	20·22	Chintalapeta	....	..	....	..	1	1
Jaladurgam Extension ; Owk Extension, Peapalli, Tekulakonda and Extension, Peddapaya, Nalla Mekalapalli, Devagudipad and Oddapalli Reserve Forests.	64,679·63	1. Jaladurgam	18·28	Jaladurgam	2. Racherla	101·06	Racherla	1	1	1
		2. Racherla	26·40	Racherla	....	..	....	..	1	1
		3. Owk	30·94	Owk	....	..	....	..	1	1
		4. Gudipad	25·44	Gudipad	....	..	....	..	1	1
Total strength ..	..	....	..	....	....	..	....	3	16	15

APPENDIX VI.

[Paragraph 26.]

List of Forest Buildings.

Locality.	Description of property.	Date of first construction.	Capital cost (where original cost or total cost of improvement is not known—Present market value).	Average of the past five years' actuals on repairs (provisions made at 2 per cent of capital cost as per data statement.
			RS.	RS.
Aliabad	Rest-house at Aliabad	1918	900	26
	Out-houses to Aliabad	1920	400	
Racherla	Range officer's quarters at Racherla ..	1920	1,200	32
	Out-houses to Racherla	1921	400	
Dhone	Range office at Dhone	1906	1,225	25
Racherla	Subordinate quarters at Racherla ..	1920	950	19
Dhone	Subordinates' line	1906	1,607	32
	Depot building	1906	800	16
	Stables to ranger's quarters	1912	200	4
	Range officer's quarters at Dhone ..	1905	3,054	46 *

* According to the data statement, the capital cost of the building including the site is only Rs. 2,310.

APPENDIX VII.

[Paragraph 26.]

Statement of Yield of Coupes from 1912–13 to 1925–26.

Year of working. (1)	Coupe number. (2)	Nature of fellings made. (3)	Area in acres. (4)	Outturn fuel. (5)	Total price obtained. (6)	Revenue per acre. (7)	Yield per acre. (8)
		KURNOOL RANGE.	RS.	CUBIC FEET.	RS. A.		CUBIC FEET.
1912–13 ..	I Woddmanu ..	Coppice with standards in the modified form—yield 1½ stacks.	120	11,655	Not available.		97
1913–14 ..	II Gadithamadugu ..	Do.	148	18,900	198 0	1 5 5	128
1914–15 ..	III Do. ..	Do.	120	6,840	120 0	1 0 0	57
Do. ..	IV Do. ..	Do.	120	8,235	115 0	0 15 4	69
1915–16 ..	V Do. ..	Do.	149	5,625	231 0	1 8 9	38
1916–17 ..	VI Do. ..	Do.	148	6,660	730 0	4 14 11	46
1917–18 ..	VII Do. ..	Do.	148	31,882½	855 0	5 12 5	215
1918–19 ..	VIII Yaperlapad ..	Do.	155	8,460	270 0	1 12 0	55
1919–20 ..	IX Do. ..	Do.	140	3,150	145 0	1 0 6	23
1920–21 ..	X Do ..	Do.	160	9,000	200 0	1 4 0	56
1921–22 ..	XI Do. ..	Do.	173	10,035	220 0	1 4 4	58
1922–23 ..	XII Do. ..	Do.	137	75,615	137 0	1 0 0	581
1923–24 ..	XIII Do. ..	Do.	160	38,160	305 0	1 14 6	239
1924–25 ..	XIV Do. ..	Do.	111	28,350	277 8	2 8 0	255
1925–26 ..	XV Do. ..	Coppice with standards ..	91	27,360	471 0	..	301
1926–27 ..	Do. ..	Coppice in a modified form.	*2 47	9,225	105 0	4 3 0	196
Do. ..	Do. ..	Do.	19	*1 6,975	*3 15 0	0 12 6	367
1928–29 ..	XVI Do. ..	Do.	160	52,470	500 0	3 2 0	328
		DHONE RANGE.					
1912–13 ..	I South Dhone ..	Coppice with standards in a modified form 1½ stacks.	186·66	7,110	Not available.		39
1913–14 ..	II Do. ..	Do.	186·60	13,500	145 0	0 13 0	63
1914–15 ..	III Do. ..	Do.	186·66	13,500	160 0	0 13 6	63
1915–16 ..	IV Do. ..	Do.	186·66	13,680	175 0	0 15 0	74
1916–17 ..	V Do. ..	Coppice with standards ..	186·66	4,275	..	..	23
1917–18 ..	VI Do. ..	Do. ..	186·66	18,675	170 0	0 14 7	100
1918–19 ..	VII Do. ..	Do. ..	142·00	18,900	210 0	1 3 0	133
1919–20 ..	VIII Do.	Do. ..	188·00	25,810	235 0	1 11 0	186
1920–21 ..	IX Do. ..	Do. ..	155·00	18,945	220 0	1 8 0	122
1921–22 ..	X Do ..	Do. ..	186·66	20,196	190 0	1 1 0	148
1922–23 ..	XI Do ..	Do. ..	200·00	18,855	240 8	1 3 0	94
1923–24 ..	XII Do. ..	Do. ..	191·00	22,500	500 0	2 12 0	124
1924–25 ..	XIII Kamalapuram ..	Do. ..	168·00	14,220	710 0	4 4 0	85
1925–26 ..	XIV Do. ..	Do. .	160·00	27,045	575 0	3 9 0	169
1926–27 ..	XV Do. ..	Coppice with standards in modified method.	170·00	22,500	705 0	6 9 0	132
1927–28 ..	XVI Do. ..	Do.	312·00	20,844	170 0	0 9 0	67
1928–29 ..	XVII Do. ..	Do.	120·00	46,326	700 0	4 11 0	†386

*1 The felled portion of previous year.
*2 Worked departmentally.
*3 Deducting the expenditure of Rs. 155 out of the total of Rs. 170 the net revenue is only Rs. 15.
† Thirty acres still remain unworked.

APPENDIX VIII.

[Paragraph 27.]

Statement of Revenue for the five years in Yerramalais Ranges (Kurnool and Dhone), 1924–25 to 1928–29.

Head of account.	1924–25.		1925–26		1926–27.		1927–28.		1928–29.		Total.		Average.	
	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.
VIII. FORESTS—RECEIPTS.	RS.	RS.	RS.	RS.	RS	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS
Timber and other produce removed from forests by Government agency—														
Timber	12	..	9	13	..	..	9	..	..	..	30	13	6	3
Firewood and charcoal	180	313	185	1,059	180	407	1,376	643	510	..	2,431	2,422	486	484
Other minor produce	1	..	..	..	..	..	..	..	6,960	6,472	6,961	6,472	1,392	1,294
Timber and other produce removed from forests by private agency—														
Timber	..	..	994	15	529	30	401	689	663	776	2,587	1,510	517	302
Firewood and charcoal	278	710	353	596	53	716	..	270	509	1,595	1,193	3,887	239	778
Grazing and fodder grass	8,677	10,704	8,650	12,081	8,681	16,431	8,964	11,139	8,972	4,461	43,944	54,816	8,788	10,963
Other minor produce	520	184	7,095	6,315	3,506	7,907	4,554	10 333	7,709	4,462	23,384	29,201	4,677	5,840
Timber and other produce removed from forests by Revenue Department—														
Timber	3,953	6,008	3,180	3,992	2,631	3,117	849	4,486	1,426	3,362	12,039	20,965	2,409	4,193
Firewood and charcoal	1,630	1,167	1,152	438	817	517	1,329	3,487	1,344	1,538	6,272	7,147	1,254	1,429
Bamboos	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other minor produce	1,563	6,555	1,986	2,406	10,505	6,593	5,696	7,702	4,293	7,771	24,043	31,127	4,809	6,225
Driftwood, waifwood and confiscated produce	26	60	20	106	54	57	59	100	29	164	188	487	38	97
Miscellaneous—														
Fines and forfeitures	..	..	1	..	105	155	..	194	114	11	220	360	44	72
Rents of buildings	..	..	2	92	9	247	15	200	2	174	28	713	6	143
Other sources	1,337	2,075	2,005	3,285	2,751	6,028	5,570	6,735	6,455	3,624	18,118	21,747	3,624	4,349
Total ..	18,177	27,876	25,632	30,398	29,821	42,205	28,822	45,978	38,986	34,410	1,41,438	1,80,867	28,288	36,177

APPENDIX VIII—*cont.*

Statement of expenditure for the five years in Yerramalais Ranges (Kurnool and Dhone).

Head of account.	1924–25.		1925–26.		1926–27.		1927–28.		1928–29.		Total.		Average.	
	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.	Kurnool.	Dhone.
8 (*b*) (i)—FORESTS—EXPENDITURE.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Timber and other produce removed from forests by Government agency—														
Timber—														
Firewood and charcoal	106	79	..	187	155	87	138	70	58	..	457	423	91	85
Timber, etc., removed by private agency.	1,573	2,283	1,461	2,259	1,473	2,389	1,525	1,520	1,516	1,321	7,548	9,772	1,510	1,954
C. Drift and waifwood and confiscated produce.	..	..	..	..	..	..	5	7	..	..	5	7	1	1
Purchase of stores, tools and plants ..	4	..	1	..	20	23	29	31	..	6	54	60	11	12
Works—Chenchu officer—														
Roads and bridges—														
Buildings	..	428	..	83	..	10	..	136	..	205	..	862	..	172
Other works	..	592	..	..	..	..	..	..	..	73	..	665	..	133
Demarcation	35	131	32	163	..	..	22	..	..	..	89	294	18	59
Surveys—Local	2	..	..	..	..	8	..	..	..	..	2	8	..	2
Sowing and planting	10	10	..	8	..	85	..	18	..	..	10	121	2	24
Protection from fire	..	188	..	121	..	..	25	75	3	35	28	419	6	84
Other works	..	..	..	3	..	..	52	30	..	..	52	33	10	7
Supplies and Services	..	..	..	1	1	1	..	..	..	..	1	2	..	..
Pay of establishment—Voted—														
Permanent	5,773	5,970	5,219	5,500	2,335	2,335	6,154	7,404	4,668	4,566	24,149	25,775	4,830	5,155
Temporary	582	770	..	..	181	181	137	145	..	..	900	1,096	180	219
Allowance—Voted—														
Travelling allowance	100	49	708	415	1,275	1,165	1,021	1,043	684	791	3,788	3,463	758	693
Fixed travelling allowance	..	..	471	236	254	301	174	214	171	114	1,070	865	214	173
Other compensatory allowance ..	..	..	180	180	254	128	122	230	123	137	679	675	134	135
Contract contingencies	..	..	105	113	294	362	302	331	86	121	787	927	157	185
Non-contract contingencies—														
Rates and taxes	..	..	5	..	1	28	11	45	..	..	17	73	3	15
Rents	..	..	78	..	95	123	202	134	78	15	453	272	91	54
Miscellaneous	..	..	..	..	..	..	17	17	..	..	17	17	3	3
Total ..	8,185	10,500	8,260	9,269	6,338	7,226	9,936	11,450	7,387	7,384	40,106	45,829	8,021	9,164

APPENDIX IX.

[Paragraph 28 (*a*).]

Statement showing the enumeration of Yepi trees (coppice shoots and seedlings) in the sample plots of 5 and 3 acres and result reduced to 1 acre.

APPEN

[Paragraph

Statement showing the enumeration of Yepi trees (coppice shoots and seedlings)

Serial number.	Name of reserve.	Year of felling of the coupe.	Walled or unwalled.	Old trees not felled when the coupe was worked. Number of trees in one acre.	Old trees not felled – Girth class. Below 3".	4" 6".	7" 9".	10" 12".	13" 15".	16" 18".	19" 21".	22" 24".	25" 27".	28" 30".	31" 33".	34" 36".	Coppice shoots. Number of clumps in one acre.	Coppice shoots – Height class rough eye estimate, the latest shoot in each clump. Below 3".	4" 6".	7" 9".	10" 12".	13" 15".	16" 18".
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
1	Gadithamadugu.	1916–17	Walled closed to grazing.	7	..	..	..	1	2	2	2	..	..	..	..	..	85	..	..	9	37	29	7
2	Gadithamadugu.	1906–07	Do.	21	..	..	..	5	6	6	3	1	..	..	..	..	93	..	..	4	30	40	12
3	Waddaman	1912–13	Do.	21	..	..	..	2	6	8	3	1	1	..	..	..	76	..	..	4	27	34	7
4	Yaperlapad ..	1919–20 1922–23	Do.	18	..	..	..	1	2	2	4	4	3	1	1	..	54	..	4	12	28	9	1
..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	South Dhone ..	1912–13 1914–15	Walled closed to grazing.	91	..	5	11	23	17	12	10	8	3	1	1	..	16	1	3	4	2	2	..
6	Yaperlapad ..	1904–05 1905–06	Unwalled, now opened to grazing.	7	..	..	..	..	1	2	1	1	..	1	1	..	20	..	..	2	3	5	5
7	South Dhone ..	1921–22	Unwalled closed to grazing.	21	5	6	3	..	2	2	1	2	..	..	..	..	16	2	8	3	2	1	..
8	Kamalapuram ..	1924–25	Do.	3	..	..	1	..	..	..	1	1	..	..	..	..	29	2	8	10	7	2	..
9	North Dhone ..	1904–05 1905–06	Unwalled now opened to grazing.	39	..	8	8	7	7	3	2	1	1	..	2	..	68	..	..	4	6	8	8
10	North Dhone ..	1905–06	Unwalled closed to grazing.	22	..	..	1	7	4	1	..	1	1	1	1	5	59	..	..	..	4	5	7
11	Kamalapuram ..	1926–27	Do.	45	3	6	8	13	7	4	2	1	1	..	..	..	15	7	7	1	..	..	..
12	Woddaman ..	Not felled. A good Yepi area.	Do.	11	..	..	1	..	..	..	2	4	2	..	..	..	39	..	..	..	7	4	14

DIX IX.

28 (*a*).]

in the sample plots of 5 and 3 acres and result reduced to 1 acre.

Coppice shoots—*cont.* Height class rough eye estimate, the latest shoot in each clump—*cont.* 19″ 21″. (25)	22″ 24″. (26)	25″ 27″. (27)	28″ 30″. (28)	31″ 33″. (29)	34″ 36″. (30)	Girth class actual measured, the biggest in each clump. Below 3″. (31)	4″ 6″. (32)	7″ 9″. (33)	10″ 12″. (34)	13″ 15″. (35)	16″ 18″. (36)	19″ 21″. (37)	22″ 24″. (38)	25″ 27″. (39)	28″ 30″. (40)	31″ 33″. (41)	Seedling that existed before the coupe was felled. (42)	Seedlings that came in to existence after the coupe was felled. (43)	Remarks. (44)
3	..	..	..	..	..	..	36	40	9	..	..	..	..	..	..	..	4	16	Average height of crop is 15′ over-size 4′.
7	..	..	..	..	..	..	24	42	18	7	1	1	..	..	..	..	4	8	Average height of crop is 15′ over-size 4′.
4	..	..	..	..	..	4	9	4	2	19	1	1	..	..	..	..	4	18	Average height of crop is 12′ over-size 14′.
..	..	..	..	..	..	11	31	8	31	..	..	..	..	..	..	..	1	15 yepi.	Average height of crop is 12′ over-size 3′.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7 chirman.	Average height of seedlings 20′. Crop consists of 50 per cent of Chirman.
1	3	..	..	..	..	2	4	4	4	1	1	..	..	..	..	..	1	50 neeroddi.	75 per cent Neeroddi + 25 per cent. Yegi worked under improvement felling. Crop deteriorating. Average height 15′.
4	1	..	..	..	..	..	3	6	5	3	3	..	..	..	..	..	5	25	Average height of coppice shoot is 15′. Canopy very open. Average height of standards 25′.
..	..	..	..	..	..	8	7	1	..	..	..	..	..	..	..	..	15	25	Standards very few Canopy very open.
..	..	..	..	..	..	14	12	3	..	..	..	..	..	..	..	..	25 somi 15 yegi 10 neroddi.	..	Crop consists of 50 per cent. Yepi, 30 per cent Neeroddi, the rest somi and chirman.
24	8	4	3	1	2	..	8	19	22	14	4	1	..	..	..	..	20	15	Pure yegi. Average height 20′, maximum height 40′ density 7′.
7	22	5	2	4	3	..	3	11	14	17	10	4	..	..	..	..	5	15	Average height 24′. These are old large trees.
..	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	5	..	Very open. Average height of crop 4′.
8	5	1	..	..	..	..	..	4	5	7	6	7	6	3	1	..	..	..	Average height of crop is 17′ to 18′.

APPENDIX X.

[Paragraph 28 (*b*).]

Ring counting in coupe XVI of 1927–28 of Kamalapuram Reserve.

Serial number of tree and coppice or seedling.	Girth over bark.	Average diameter with bark.	Average diameter of wood-heart.	Number of rings.	Remarks.
1. Seedling	4′—5″	1—25″	No. H.W.	9	The rings are not distinct and so the countings are not very correct.
2. Do.	6′—5″	2″	25″	14	....
3. Do.	5″	1′—5″	2″	9	....
4. Do.	5″	1′—5″	No. H.W.	16	....
5. Coppice	4′—5″	2′-12″	Do.	15	....
6. Seedling	8′—5″	2′—5″	Do.	20	....
7. Do.	,,	,,	3″	15	....
8. Do.	9″	2′—7″	75″	16	....
9. Do.	9″	2′-75″	1″	19	....
10. Coppice	8″	2′—5″	No.H.W.	15	....
11. Seedling	10	3″	3″	forked. 18	....
12. Do.	11″	3·25″	75″	wound at 3′. H.W. 8″ + S.W. 2″ -- 28	Eight rings in heartwood and 20 in sapwood.
13. Do.	10″	3″	1·3″	9 + 16 = 25	Nine rings in heartwood and 16 in sapwood.
14. Do.	10′—5″	3·25″	No.H.W.	28	....
15. Coppice	10″	3″	1″	23	....
16. Seedling	13″	4″	1·25″	4 + 23 = 27	Four rings in heartwood and 23 in sapwood.
17. Do.	13′—5″	4′—25″	3″	18 + 14 = 32	Forked.
18. Do.	13″	4″	1·5″	17 + 19 = 36	....
19. Do.	13″	4″	No.H.W.	39	....
20. Coppice	14″	4½″	2·3″	20 + 20 = 40	Forked at 4″.
21. Seedling	16″	5″	2·5″	15 + 26 = 41	Forked at 5″.
22. Do.	17″	5—5″	3—5″	19 + 34 = 53	Straight bole without branches.
23. Do.	18″	5—25″	3—2″	21 + 15 = 36	....
24. Do.	18″	5—75″	2—5″	20 + 24 = 44	Forked at 4′.
25. Coppice	26½″	5″	3″	25 + 17 = 42	Do. 1′.
26. Seedling	21″	6—5″	2″	26 + 30 = 56	Do. 7′.
27. Do.	20″	6′25″	3—75″	22 + 24 = 46	....
28. Do.	19″	6″	1″	9 + 40 = 49	....
29. Do.	21″	6—5″	2—5″	16 + 34 = 50	....
30. Coppice	9″	6″	2—5″	14 + 31 = 45	....

APPENDIX XI.

[Paragraph 28 (c).]

List of 51 yepi trees tested for unsoundness in Kamalapuram Coupe XVI.

Serial number. (1)	Girth of the stem at 4½ feet from ground. (2)	Girth of the stem at cut end (3)	Length of the workable stem (4)	Diameter of the hole in the middle of the wood. (5)	Diameter of the heartwood. (6)	Diameter of the sapwood (7)	Total diameter. (8)	Sound or not. (9)	Approximate height of the tree. (10)
1	17″	24″	52″ timber	⅜″ small hole.	3′ 7″ *	3″	7′	Hole forming	20′
2	18″	24″	45″ ,,	½″	3½″	3″	7″	Began decay	18′
3	21″	26″	42′ ,,	..	4½″	3″	7½″	Sound	21′
4	20″	20″	30″ fuel	..	3″	3″	6″	Beginning to decay	24′
5	19″	19″	72′ timber	..	2″	4″	6″	Sound	30′
6	30″	32″	36′ fuel	3″	2″	4″	9″	Not sound	20′
7	21″	23″	72′ timber	..	3″	4″	7″	Sound	21′
8	21″	28″	80′ ,,	2″	4″	3″	9″	Not sound	30′
9	18″	21″	69′ ,,	¼″	2¼″	4″	6½″	Do.	21′
10	16″	22″	84′ ,,	..	2″	4″	6″	Do.	21′
11	19″	21″	84″ ,,	..	½′	5½″	6″	Sound	21′
12	22″	23″	3′-6″ fuel	..	3½″	2½″	6″	Do.	18′
13	17″	19″	69″ timber	..	2½″	3″	5½″	Do.	24′
14	22″	28″	76″ ,,	2″	3″	3″	8″	Not sound	24′
15	18″	20″	63″ ,,	..	2″	4″	6″	Sound	21′
16	16″	20″	65″ ,,	..	3″	3″	6″	Do.	24′
17	15″	24″	57″ ,,	..	1″	5″	5″	Do.	21′
18	16″	21″	60″ ,,	½″	1″	4″	5½″	Not sound	24′
19	24″	30″	69″ ,,	..	5½″	3½″	9″	Sound	30′
20	21″	22½″	41″ ,,	..	2½″	4½″	7″	Do.	27′
21	35″	33″	2′ fuel	4″	2″	4″	10″	Not sound	21′
22	27″	27″	1′ ,,	2½″	5″	1½″	9″	Do.	24′
23	30″	30″	1′ ,,	1″	5½″	2″	8½″	Do.	21′
24	29″	29″	3′ ,,	3½″	½″	4″	8″	Do	21′
25	21″	22″	69′ timber	1″	3″	2½″	6½″	Do.	21′
26	32″	24″	2′ fuel	5″	2″	4″	11″	Do.	24′
27	22″	24″	40′ ,,	3″	2″	3″	8″	Do.	24′
28	21″	26″	43′ ,,	..	4″	4″	8″	Sound	21′
29	12″	21″	70″ timber	..	2″	4½″	6½″	Do.	24′
30	20″	27″	81″ ,,	2″	3″	2½″	7½″	Not sound	27′
31	23″	26″	24″ fuel	1″	4″	3″	8″	Do.	30′
32	21″	24″	63″ timber	..	4′	4″	8″	Sound	24′
33	24″	29″	17½″ fuel	..	4″	4″	8″	Do.	24′
34	31″	29″	24″ ,,	3″	2″	3½″	8½″	Unsound	24′
35	27″	29″	34″ ,,	4″	1″	4″	9″	Do.	24′
36	33″	33″	30″ ,,	1″	4″	4″	9″	Do.	21′
37	27″	28″	12″ ,,	5″	1″	2½″	8½″	Do.	24′
38	30″	31″	18″ ,,	4″	3″	2½″	9½″	Do.	18′
39	28″	28″	62′ ,,	4″	2″	3″	9″	Do.	24′
40	27″	27″	27″ ,,	2″	3′	2½″	7½″	Do.	21′
41	23″	23″	27″ ,,	2″	2″	2″	6″	Do.	27′
42	28″	26″	22″ ,,	3″	2″	3″	8″	Do	21′
43	27″	28″	24″ ,,	3″	2″	3″	8″	Do.	18′
44	33″	35′	34″ ,,	4″	½″	3½″	8″	Do.	15′
45	18″	26″	60″ ,,	6″	1″	2″	9″	Do.	21′
46	32″	36″	60″ ,,	4″	3″	3″	10″	Do.	21′
47	34″	34″	38″ ,,	6″	9″	3″	11″	Do.	21′
48	34″	35″	22″ ,,	2″	6″	2″	10″	Do.	21′
49	32″	35″	26″ ,,	8½″	½″	2″	11″	Do.	21′
50	34″	38″	18″ ,,	9″	1″	2″	12″	Do.	21′
51	35″	43″	36″ ,,	5″	4″	4″	13″	Do.	24′

* Out of this 1 is under decay.

APPENDIX XII.

[Paragraph 30.]

Statement of Working Circles.

Name of Range. (1)	Serial number and name of reserve. (2)	Area in acres. (3)	Fuel Working Circle. (4)	Yepi fibre Working Circle. (5)	Palmyra Working Circle. (6)	Minor Forest Produce Working Circle. (7)	Grazing Working Circle. (8)	Veldurthi Working Circle. (9)	Sandal propogation Working Circle. (10)
		RS.	ACS.	ACS.	ACS.		ACS.	ACS.	
Kurnool Range.	1. Gadidamadugu	4,345·00	1,484·08	..	..	Same as in column 3.	2,514·00	..	Ten one acre plots in each beat.
	2. Woddaman	1,283·00	1,082·00	..	..	Do.	1,283 00	..	
	3. Yaperlapad	7,346·00	4,398·08	..	..	Do.	4,406·00	..	
	4. Lanjabanda	3,950 00	2,937·90	..	..	Do.	3,950·00	..	
	5. Lanjabanda Extension ..	3,107·00	..	1,774·40	..	Do.	3,107·00	..	
	6. Bethamcherla	9,245·00	6,147·00	2,014·00	..	Do.	9,245·00	..	
	7. Paniem	23,271·70	1,998·40	..	..	Do.	23,271·70	..	
	8. Gani	44,405·00	1,672 08	..	60·04	Do.	44,405·00	..	
	9. Veldurthi	883·00	..	..	..	Do.	..	883·00	
	10. Alamur	180·00	..	..	180·00	Do.	180·00	..	
Dhone Range.	11. North Dhone	14,346·00	6,638·00	1,892·00	..	Do.	14,346·00	..	
	12. Kamalapuram	1,880·00	1,041·00	..	..	Do.	1,880·00	..	
	13. Madhavaram	5,889·00	1,822·00	..	..	Do.	5,889·00	..	
	14. South Dhone	7,049·00	3,832·44	..	..	Do.	5,409·00	..	
	15. Owk	31,853·00	..	..	..	Do.	31,853·00	..	
	16. Ôwk, Extension No. I ..	643·00	..	..	643·00	Do.	643·00	..	
	17. Do. No. II ..	4·45	..	..	..	Do.	4·45	..	
	18. Oddepalli	1,313·00	306 00	..	..	Do.	1,313·00	..	
	19. Devagudipad	2,844 28	..	..	..	Do.	2,844·28	..	
	20. Nallamekalapalle	683·00	..	..	..	Do.	683·00	..	
	21. Peddapaya	3,365·67	..	..	..	Do.	3,365·67	..	
	22. Jaladurgam	16,814·60	1,578·00	896·00	..	Do.	16,814·60	..	
	23. Do. Extension No. I.	4,108 00	..	..	..	Do.	4,108·00	..	
	24. Jaladurgam Extension No. II.	80 00	..	..	..	Do.	80·00	..	
	25. Jaladurgam Addition No. I.	5·46	..	..	..	Do.	5·46	..	
	26. Jaladurgam Addition No. II	12·02	..	..	..	Do.	12·02	..	
	27. Tekulakonda	715·00	..	..	..	Do.	715·00	..	
	28. Do. Extension No. I.	158·00	..	..	..	Do.	158·00	..	
	29. Tekulakonda Extension No. II.	862·00	..	..	..	Do.	8 62·00	..	
	Total ..	190,641·73	..	..	..	..	183,437·18	..	

NOTE.—In column 8 stone-walled areas permanently closed to grazing are excluded.

APPENDIX XIII (*a*).

[Paragraph 39.]

SAMPLE FORM OF AGREEMENT FOR FUEL COUPES.

Forest Department, Madras, Kurnool West District.

Forests.

AGREEMENT made this day of 193 between son of of of (hereinafter called the ' contractor ' which terms shall where the context admits include the said his heirs, executors, administrators, legal representatives and assigns) of the one part and THE RIGHT HONOURABLE THE SECRETARY OF STATE FOR INDIA IN COUNCIL (hereinafter called the Secretary of State) of the other part.

WHEREAS the contractor has bid for Rs. ( ) only for the right to fell collect remove and dispose of the stock in the forests described in the schedule and shown in the map attached to the agreement and such bid has been accepted by the District Forest Officer of West Kurnool, Kurnool acting for and on behalf of the Secretary of State upon the terms and conditions hereinafter appearing.

AND WHEREAS the contractor has deposited in Government Postal Savings Bank Account No. in the name of the said as such District Forest Officer as aforesaid the sum of Rs. as security for the due performance by him the contractor of the provisions hereinafter contained.

NOW THESE PRESENTS WITNESS that for carrying the said agreement into execution, the contractor for himself his heirs, executors, administrators, legal representatives and assigns and the Secretary of State for himself his successors and assigns do hereby mutually contract with the other and others of them as follows:—

Rights under contract.

1. The contractor shall have the right during the term of from the day of 193 to fell to collect store remove and dispose of subject to the conditions and restrictions named in the last column of the schedule hereto and conditions of sale published in the Forest Sheet No. dated all timber and fuel except the standards noted in the schedule attached to this agreement and entered in the register to be supplied to the contractor, now growing or being in or upon the lands set forth in schedule hereto and delineated in the plan hereto annexed SAVE and EXCEPT all or any of such stock to which any right-holder permit-holder or bona fide ryot is now or may at any time or times hereafter be entitled under the provisions of Madras Forest Act, 1882, or any modification thereof or under any rules or proceedings of the Forest Department of the Government of Madras and save and except the trees hereinafter specially reserved and the produce thereof respectively.

2. The contractor shall not dispose of or sublet such right or any part thereof without the written permission of the District Forest Officer of Kurnool West for the time being (hereinafter called the District Forest Officer) which permission may be refused by the latter without assigning any reason for so doing.

3. In case of any question arising with regard to or any objection being taken by any person to the contractor's rights to fell collect or store or to remove the stock collected along any routes or through any part of the said lands the District Forest Officer may, if and whenever any such question may arise serve the contractor with a written notice prohibiting his felling collecting or storing or removing any stock in any part of the said lands or collecting such stock or regulating the storing or removal thereof and on the service of any such notice the orders and directions therein contained shall until the same are varied by the District Forest Officer or the Collector of the Kurnool district for the time being (hereinafter called ' the Collector ') be taken as part of the conditions of this contract anything herein contained to the contrary notwithstanding and shall be observed and performed by the contractor.

4. The contractor shall have no claim for compensation for any loss he may incur by carrying out the provisions of any such notice nor for any loss caused to him by his being prevented or obstructed by any Zamindar Land-owner or other person on plea of right of ownership or right of enjoyment or otherwise from felling collecting storing or removing any of the stock.

Coppicing.

5. The coupe has been demarcated by the Range Officer before the sale with a cleared line 12 feet wide in which all growth will be cut flush with the ground. The coupe has also been subdivided into strips for convenience of working and the strips similarly demarcated 3 feet wide by the Range Officer. All these lines shall be kept cleared by the contractor until the expiry of the contract.

6. The contractor shall work only in one strip at a time and shall do so in the order indicated in the plan attached to this agreement. The work of felling and removal in each strip shall be completed before felling can commence in the next strip.

7. The contractor shall furnish the District Forest Officer with a receipt for the number of standards marked in the coupe. Standards to the number of . . . have been marked in the coupe. He shall be responsible that no standard is felled, lopped or damaged in any way whatsoever during the exploitation. If any standard is so felled, lopped or damaged he shall pay for each standard so felled, lopped or damaged such amount as may be decided on by the District Forest Officer.

8. In felling a coupe felling should unless otherwise ordered by the District Forest Officer commence in the strip at the end of the coupe furthest from the route by which the timber is to be transported and at the furthest end of the strip and in each successive strip in the same manner and should proceed continuously towards the end.

9. The contractor shall be fully responsible for any illicit felling of trees or removals of produce from fellings within two furlongs of the coupe purchased by him and such illicit fellings may render his contract liable to be cancelled in addition to the forfeiture of all moneys paid by him and of all stock collected under the contract but left unremoved from the area.

10. The contractor shall commence to work on each coupe or at one strip corner thereof and shall proceed with the work evenly making the cleaning complete as it proceeds and removing everything that is to be cleared from the coupe or strip at the same time and cutting down save as herein provided all trees shrubs and bushes whether large or small level with the ground leaving the stumps with a smooth slightly sloping surface and with the bark intact and adhering to the wood all round and without breaking or disturbing the surface of the ground.

11. As the felling proceeds the contractor shall continue to erect around the coupe in which he is working a fence or thorns and brushwood not less than four feet broad at the base and four feet high and with stakes driven in sufficient to support it against wind or water and its construction shall keep pace with the clearing so that by the end of the completion of the working the fence shall be complete round the coupe on all four sides and the whole of such fence shall be maintained and handed over by the contractor in good order and repair on conclusion of the work in the coupe.

12. The wood collected should be stacked only in such places as may be approved of and shall not be removed from that place until it is inspected and passed by the Range Officer.

13. The contractor shall personally supervise and control the working on the spot and shall be present whenever notice is given by the Range Officer for inspection of coupe or strip. Subject to the above provisions he may employ an agent or agents to assist him in the work, but no such agent shall be considered as duly accredited unless his name, residence and a specimen of his signature have been submitted to and approved of by the District Forest Officer and until he has been provided by the contractor with a sufficient power-of-attorney and a copy of the same has been deposited with the Range Officer concerned.

14. On completion of each strip the contractor shall forthwith give written intimation of the date of completion of the war to the Range Officer who will thereupon inspect the work and pass written orders of the result and shall either redeliver the same strip for proper completion of the work or shall deliver the next strip to the contractor or suspend the working under this contract intimating the fact to the District Forest Officer as the case may require.

15. The contractor shall have all felling and clearing done by men employed by him and shall not allow purchasers of produce or anyone else to carry out the same.

16. No charcoal shall be burnt in any coupe or strip except at such places and in such seasons as may be allowed in writing by the District Forest Officer. The contractor shall see that no inflammable material is allowed to lie within a radius of 30 feet round any charcoal pit.

Removal of Produce.

17. Subject to any orders that may be passed by the District Forest Officer from time to time the contractor shall not remove or allow to be removed from the coupe or depot any of the stock except under cover of a permit prescribed by the department for every cart-load or head-load taken separately and to be bought from the Range Officer at 8 annas per hundred forms. Any removal without such permit shall render this contract liable to be cancelled by the District Forest Officer and the stocks so removed liable to be forfeited to Government if seized within forest limits.

18. The contractor shall duly fill up and sign in ink every permit in all three parts thereof before any portion of the permit is removed from the book and shall be responsible that his agent, if any, does so. In case of permits made out in favour of purchasers the amount paid shall in each case be shown and all permits shall be issued only in the coupe or strip concerned.

19. The contractor shall maintain a register of permits in the printed form for the time being in force supplied by the Range Officer and shall always have such register in the coupe or strip whenever a removal of stock is to be made therefrom and shall invariably register therein every permit issued by him then and there with the amount and nature of the actual removals. The contractor shall close and sign the register on the 22nd day of every month and shall submit a copy thereof so as to reach the Range Officer by the 25th of the same month with duplicates of permits issued attached and with the certificate in the form appended thereto duly filled up.

20. As each book of permit forms is issued the contractor shall send the complete counterfoil of the previous book to the Range Officer and on expiry of the contract he shall forthwith return any partly used book and all unused books and shall be entitled to a proportionate refund of the price for all unused forms returned in good order. He shall also at the same time return the registers maintained as provided for in paragraph 6.

21. The contractor, his servants and his agents shall abstain from the following acts, that is to say, (1) from using any road within the limits of the said forest except such as may be approved in this behalf by the District Forest Officer for the bringing into or taking from the said coupe any cart, animal or material, (2) from permitting cattle of any kind to be loose or to graze within the said coupe.

22. All tracks to be used for export by contractor that lie within fire protected forests are to be cleared of grass and undergrowth (but not burnt) 15 feet on either side of the track from the edge of the same in order to ensure fire protection in the fire season.

23. In the event of the contractor failing to remove the stock from the leased area by the expiry of the lease such stock shall be forfeited and shall revert to and become the absolute property of the Secretary of State, and the contractor shall not by reason of such forfeiture be entitled to any refund or abatement of the amount payable or due by him under this contract.

Completion of work.

24. The contractor shall complete the work provided for herein including removal of all the cut stock from the forest by 31st March 1921.

General Provisions.

25. The contractor shall be responsible for the value of timber and other material cut by illicit felling within his coupe or a furlong thereof or that may be traceable to him his agents or employees or other persons in any way connected with him in the said lease, and shall pay on demand the sum fixed by the District Forest Officer (whose decision thereon shall be final) for damages in respect thereof. The contractor shall be bound to report any such felling to the Range Officer and in the event of any failure on his part to do so this agreement may be cancelled by the District Forest Officer.

26. The contractor shall be fully responsible for the acts of himself, his agents and persons employed by him or them and of all purchasers to whom permits are issued and shall make good any damage in the forest done by them or any or either of them on resulting from their acts or omission by fire or otherwise the amount of such damage to be fixed in each case by the District Forest Officer whose decision thereon shall be final. The contractor shall pay all such sums as the District Forest Officer may determine to be necessary for doing any work required to be done by the contractor under the contract which he has failed to do after notice.

Fires.

27. If any fire occurs in the forest area to which this contract applies, the contractor, his agents, employees, and all persons to whom permits are issued shall render every assistance and use their best endeavours to extinguish the fire, and any one of such persons shall in all cases give immediate notice of the occurrence of the fire to the nearest Forest, Police or Revenue Officer.

28. No one shall be allowed to cook or make fires of any kind from 1st January except as laid down in clause 29 below.

29. Workmen employed to carry out the work shall not camp in the forest as they please but will have particular places assigned to them on previous request to the Range Officer which places must be cleared of grass and undergrowth so as to prevent any fires from getting beyond the places so assigned. Even within such places no careless making of fires will be allowed and all fires must be thoroughly put out when no longer required.

Accounts and Payments.

30. The contractor shall keep correct accounts in the form prescribed from time to time by the District Forest Officer of all stock obtained under this contract and shall submit them to the Range Officer immediately after the expiry of every month, along with the accounts referred to in clause 19.

31. The contractor should particularly indicate all timber disposed of by him as ploughs or parts of ploughs or other agricultural implements, chiefly plough-shares or Nagelis and note species of timber and kind of other produce removed by him in permits and accounts maintained by him.

32. The contractor shall pay into the Treasury at
the sum of Rs. by the following instalments:—

(*a*) On or before the day of 193 Rs.
(*b*) On or before the day of 193 Rs.
(*c*) On or before the day of 193 Rs.

33. Interest at $6\frac{1}{4}$ per cent per annum shall be paid by the contractor on all instalments in arrears, in addition to which the contractor shall be liable on failure to pay any one of the instalments on the due date to have this contract cancelled by the District Forest Officer.

34. Any money due by the contractor or levied under the terms of this contract shall under section 66 of the Madras Forest Act V of 1882 be recoverable from him by the attachment and sale of his property under Madras Act II of 1864 or any statutory modification thereof.

Deposit.

35. The sum of Rs. deposited by the contractor together with the interest accruing thereon is a security deposited for the due fulfilment of all and every of the conditions of this contract for breach of any of which by the contractor the District Forest Officer shall be entitled to forfeit the deposit in whole or in part either during or after the expiry of this contract and in the event of any such forfeiture pending the continuance of the contract any sum so forfeited shall be immediately made good by the contractor who will not be allowed to continue his work until such deposit has been brought up to the full amount originally deposited.

Cancelment of Contract.

36. In the event of any breach by the contractor or his agents of any of the conditions of this agreement the District Forest Officer shall have the right besides enforcing forfeiture of all or any part of the said deposit to cancel this contract by written notice and in such case at the option of the District Forest Officer all stock the subject of this agreement may either be resold or be worked departmentally by Government and the contractor shall be responsible for and shall make good to the Secretary of State any loss which Government may incur on any such resale or departmental working as the case may be, but shall have no claim to any surplus which Government may realize thereby.

Return of Deposit.

37. The security deposit or the balance thereof if any deductions have been made under any of the above conditions shall be returnable to the contractor two months after the expiry of the contract on production by the contractor of an order in writing by the District Forest Officer releasing the contractor from all liabilities under this contract.

Arbitration.

38. In case of any dispute arising between the District Forest Officer and the contractors as to any matter arising under this contract such dispute shall be referred to Collector whose decision thereon shall be final.

Madras Forest Act, 1882.

39. The contractor shall at all times comply with the provisions of the Madras Forest Act, V of 1882, and all rules from time to time in force thereunder, and the provisions of this contract shall be taken in all respects as subject to such Act and rules.

IN WITNESS whereof the contractor and the Kurnool West District Forest Officer, acting under the direction of His Excellency the Governor-General of India in Council acting for and on behalf of the Secretary of State have hereunto set their respective hands the day and year first above written.

Schedule above referred to.

District.	Taluk.	Range.	Name, particulars of the area and extent.	Conditions and restrictions.
				(*a*) No conversion of any kind shall be allowed within reserved forest limits, except such as is generally done for easy transport of timber, without the previous written permission of the District Forest Officer. (*b*) The contractor must always endeavour to comply with demands of the local public or the local industrial workers of the neighbouring villages at reasonable market rates. Within one month from commencement of working a coupe, he should submit to the District Forest Officer a list of prices charged for the various products of the coupe or charged to each industrial worker, for the quantities and kinds of produce he desires to work and remove from the coupe under the contractor's supervision. (*c*) The contractor shall be bound to hand over to the Range Officer after the completion of the work, the full number of standards as per register supplied to him and obtain a receipt from the Range Officer. (*d*) Form No. I permit should be issued for all removals by cart-loads. Head-load permits should also be issued for removals by head loads though the timber transit rules do not require it.

Contractor.

1. Signed by the abovenamed in the presence of }

District Forest Officer, Kurnool West Division.

2. Signed by the abovenamed in the presence of }

Range Officer
Range.

Dated 193

APPENDIX XIII (*b*).

[Paragraph 39.]

Sample Form of Agreement for Yepi Fibre Coupes and Minor Forest Produce.

Agreement made this day of 193 between of (hereinafter called "the contractor" which term shall where the context admits include the said his heirs executors administrators legal representatives and assigns) of the one part and the Right Honourable the Secretary of State for India in Council (hereinafter called the Secretary of State) of the other part.

Whereas the contractor has tendered for Rs. only for the right to Extract Yepi-fibre in the forest hereinafter referred to and such bid has been accepted by the District Forest Officer of West Kurnool acting for and on behalf of the Secretary of State upon the terms and conditions hereinafter appearing.

And whereas the contractor has deposited Rs. as security for the due performance by him the contractor of the provisions hereinafter contained.

Now these presents witness that for carrying the said agreement into execution the contractor for himself his heirs executors administrators legal representatives and assigns and the Secretary of State for himself his successors and assigns do hereby mutually contract with the other and others of them as follows:—

Rights under contract.

1. The contractor shall have the right during the term of from the day of 193 to collect, store, remove and dispose of subject to the conditions and restrictions named in the last column of the schedule hereto and conditions of sale published in the Forest Sheet No. , dated the various kinds of produce mentioned in the first column of such schedule growing or being in or upon that lands set forth in such schedule save and except all or any of such produce to which any right-holder, permit-holder or bona fide ryot is now or may at any time or times hereafter be entitled under the provisions of Madras Forest Act, 1882, or any modification thereof or under any rules or proceedings of the Forest department of the Government of Madras.

2. The contractor shall not dispose of or sublet such right or any part thereof without the written permission of the District Forest Officer, West Kurnool, for the time being (hereinafter called the District Forest Officer) which permission may be refused by the latter without assigning any reason for so doing.

3. In case of any question arising with regard to or any objection being taken by any person to the contractor's right to collect or to store the produce collected in any part of the said lands or to remove the produce collected along any routes or through any part of the said lands or to collect any of the said produce the District Forest Officer may, if and whenever any such question may arise serve the contractor with a written notice prohibiting his collection or storing in any such part of the said lands or collecting any such produce or regulating the storing or removal of any produce and on the service of any such notice the orders and directions therein contained shall until the same are varied by the District Forest Officer or the Collector of Kurnool district for the time being (hereinafter called "the Collectors") be taken as part of the conditions of this contract anything herein contained to the contrary notwithstanding and shall be observed and performed by the contractor.

4. The contractor shall have no claim for compensation for any loss he may incur by carrying out the provisions of any such notice nor for any loss caused to him by his being prevented or obstructed by any zamindar land-owner or other person on plea of right of ownership or right of enjoyment or otherwise from cutting, storing or removing any of the said produce.

Collection of produce.

5. The contractor shall personally supervise and control the working on the spot and shall be present whenever notice is given by the Range Officer for inspection of reserve or working circle. Subject to the above provisions he may employ an agent or agents to assist him in the work, but no such agent shall be considered as duly accredited unless his name, residence and a specimen of his signature have been submitted to

and approved of by the District Forest Officer and until he has been provided by the contractor with a sufficient power-of-attorney and a copy of the same has been deposited with the Range Officer.

6. The contractor shall have all collection done by men employed by him and shall not allow purchasers of produce or anyone else to carry out the same.

7. The contractor shall first engage and employ all Chenchus coolies or cartmen being in settlement in the forests for extracting the produce of his leased area; he may only employ outside labour from the villages, if more labour than that available in the settlements be needed for carrying on his work.

8. Every servant of the contractor or coolie to whom authority is granted for collection of the produce shall be separately supplied with a chit issued by the contractor or his authorized agent.

9. In the collection of the produce no damage shall be done to the trees by the lopping or breaking of branches and no immature pods shall be collected.

(*a*) The Forest Department should be allowed to collect the required quantity of babul pods for annual cultural operations.

Removal of produce.

10. Subject to any orders that may be passed by the District Forest Officer from time to time the contractor shall not remove or allow to be removed from the area or depot any of the stock except under cover of a yellow permit for every cart-load or head-load taken separately and shall use for the purpose printed permit books in form C to be bought from the Range Officer at 8 annas per hundred forms. Any removal without such permit shall render this contract liable to be cancelled by the District Forest Officer and the stocks so removed liable to be forfeited to Government if seized within forest limits. In every case the quantity of the produce and the time allowed for its removal shall be clearly written on the permit.

11. The contractor shall duly fill up and sign in ink every permit in all three parts thereof before any portion of the permit is removed from the book and shall be responsible that his agent, if any, does so. In case of permits made out in favour of purchasers the amount paid shall in each case be shown and all permits shall be issued only in the reserve or working circle concerned.

12. The contractor shall maintain a register of permits in the printed form for the time being in force supplied by the Range Officer and shall always have such register in the reserve or working circle whenever a removal of stock to be made therefrom and shall invariably register therein every C permit issued by him then and there with the amount and nature of the actual removals. The contractor shall close and sign the register on the 22nd day of every month and shall submit a copy thereof so as to reach the Range Officer by the 25th of the same month with duplicates of permits issued attached and with the certificate in the form appended thereto duly filled up.

13. As each book of permit forms is issued, the contractor shall send the complete counterfoil of the previous book to the Range Officer and on expiry of the contract he shall forthwith return any partly used book and all unused books and shall be entitled to a proportionate refund of the price for all unused forms returned in good order. He shall also at the same time return the registers maintained as provided for in paragraph 12 hereof.

14. The contractor, his servants and his agents shall abstain from the following acts, that is to say, (1) from using any road within the limits of the said forest except such as may be approved in this behalf by the District Forest Officer for the bringing into or taking from the said area any cart, animal or material, (2) from permitting cattle of any kind to be loose or to graze within the said area.

Completion of work.

15. The contractor shall complete removal of all the collected stock from the forest within ten days from the date of expiry of this agreement, viz., 31st March , provided that any time elapsing between the intimated date of any order by the Range Officer stopping work in any portion and the date of receipt of the Range Officer's order to recommence work shall be excluded in calculating the said period.

16. In the event of the contractor failing to remove the stock from the leased area by the time referred to in clause 15, such stock shall be forfeited and shall revert to and become the absolute property of the Secretary of State, and the contractor shall not by reason of such forfeiture be entitled to any refund or abatement of the amount payable or due by him under this contract.

General provisions.

17. The contractor shall be responsible for the value of timber and other material cut by illicit felling within his area or a furlong thereof or that may be traceable to his agents or employees or other persons in any way connected with him in the said lease, and shall pay on demand the sum fixed by the District Forest Officer (whose decision thereon shall be final) for damages in respect thereof. The contractor shall be bound to report any such felling to the Range Officer and in the event of any failure on his part to do so this agreement may be cancelled by the District Forest Officer.

18. The contractor shall be fully responsible for the acts of himself, his agents and persons employed by him or them and of all purchasers to whom permits are issued and shall make good any damage in the forest done by them or any or either of them or resulting from their acts or omission by fire or otherwise the amount of such damage to be fixed in each case by the District Forest Officer whose decision thereon shall be final. The contractor shall pay all such sums as the District Forest Officer may determine to be necessary for doing any work required to be done by the contractor under the contract which he has failed to do after notice.

19. All yepi over 3 feet in girth already pollarded in the past is to be worked for the extraction of fibre during the current year ending with .

20. No branches bigger than 9 inches in girth should be cut for fibre and the lease will be entitled to the branch wood of which the fibre extracted.

21. The coupe is to be worked in the regular manner from side to side and not wherever the contractor pleased.

22. C. Form yellow permits for the removal of fibre should be obtained from the concerned Range Officer on payment of 8 annas for a book of 100 permits.

23. The contractor should furnish the accounts of extraction in maunds on the 21st of every month in the form prescribed.

Fires.

24. If any fire occurs in the forest area to which this contract applies, the contractor, his agents, employees and all persons to whom permits are issued shall render every assistance and use their best endeavours to extinguish the fire, and any one of such persons shall in all cases give immediate notice of the occurrence of the fire to the nearest Forest, Police or Revenue Officer.

25. No one shall be allowed to cook or make fires of any kind from 1st January except as laid down in clause 26 below.

26. Workmen employed to carry out the work shall not camp in the forest as they please but will have particular places assigned to them on previous request to the Range Officer which places must be cleared of grass and undergrowth so as to prevent any fires from getting beyond the places so assigned. Even within such places no careless making of fires will be allowed, and all fires must be thoroughly put out when no longer required.

Accounts and payments.

27. The contractor shall keep correct accounts in the form prescribed from time to time by the District Forest Officer of all stock obtained under this contract and shall submit them to the Range Officer immediately after the expiry of every month, along with the accounts referred to in clause 12.

28. The contractor has paid on at Treasury Rs. and shall pay into the Treasury at the sum of Rs. by the following instalments:—

(*a*) On or before the day of 193 Rs.

29. Interest at $6\frac{1}{4}$ per cent per annum shall be paid by the contractor on all instalments in arrears, in addition to which the contractor shall be liable on failure to pay any one of the instalments on the due date to have this contract cancelled by the District Forest Officer.

30. Any money due by the contractor or levied under the terms of this contract shall under section 66 of the Madras Forest Act V of 1882 be recoverable from him by the attachment and sale of his property under Madras Act II of 1865 or any statutory modification thereof.

Deposit.

31. The sum of Rs. deposited by the contractor together with the interest accruing thereon is a security deposited for the due fulfilment of each and all of the conditions of this contract for breach of any of which by the contractor the District Forest Officer shall be entitled to forfeit the deposit in whole or in part either during or after

the expiry of this contract and in the event of any such forfeiture pending the continuance of the contract any sum so forfeited shall be immediately made good by the contractor who will not be allowed to continue his work hereunder until such deposit has been brought up to the full amount originally deposited.

Cancelment of contract.

32. In the event of any breach by the contractor or his agents of any of the above conditions the District Forest Officer shall have the right besides enforcing forfeiture of all or any part of the said deposit to cancel this contract by written notice and in such case at the option of the District Forest Officer all stock the subject of this agreement may either be resold or be worked departmentally by Government and the contractor shall be responsible for and shall make good to the Secretary of State any loss which Government may incur on any such resale or departmental working as the case may be, but shall have no claim to any surplus which Government may realize thereby.

Return of deposit.

33. The security deposit or the balance thereof if any deductions have been made under any of the above conditions shall be returnable to the contractor after the expiry of the contract on production by the contractor of an order in writing by the District Forest Officer releasing the contractor from all liabilities under this contract.

Arbitration.

34. In case of any dispute arising between the District Forest Officer and the contractor as to any matter arising under this contract other than those as to which the decision of the District Forest Officer is hereby declared to be final such dispute shall be referred to the Collector whose decision thereon shall be final.

Madras Forest Act, 1882.

35. The contractor shall at all times comply with the provisions of the Madras Forest Act V of 1882, and all rules from time to time in force thereunder, and the provisions of this contract shall be taken in all respect as subject to such Act and rules.

In witness whereof the contractor and the District Forest Officer acting under the direction of His Excellency the Governor-General of India in Council acting for and on behalf of the Secretary of State have hereunto set their respective hands the day and year first above written.

Schedule above referred to.

District.	Taluk.	Village.	Name and particulars of the area.	Conditions and restrictions.
				1. The contractor should not interfere with the bona fide removal of leaves for manure from unreserved lands as per privileges conceded by rule 7 of the rules under section 26 of the Forest Act or from reserved forests and reserved lands on permits issued by the department at the seigniorage rate obtaining in the district. 2. The removal of leaves for manure under the privileges quoted above by the ryots or others for agricultural purposes shall be subject to the restrictions that a branch is not permitted to be cut at a greater distance than one foot from the growing point. 3. The contractor must always endeavour to comply with the demands of the public and local industrial workers of the neighbouring villages at reasonable market rates. Within one month from commencement of working the area he should submit to the District Forest Officer a list of prices charged for the various prodocts for the area or charged to industrial workers for the quantities and kinds of produce he desires to work and remove from the area under the contractor's supervision. 4. The contractor should not store the produce outside his leased area.

Contractor.

Signed by the abovenamed in the presence of }

District Forest Officer, Kurnool West.

Signed by the abovenamed in the presence of }

Dated 193 .

Range Officer,

Range

APPENDIX XIV (*a*).

[Paragraph 39.]

Form of monthly account to be submitted by the fuel coupe contractors.

Name of felling series and number of coupe.	Name of contractor.	Name of produce collected.	Rate at which collected.	Quantity collected in coupe.			Quantity transferred to the depot.			Sales in the depot.			Rate at which the produce was sold in the month.	Name and address of purchaser.	Name of depot.	Remarks.
				Total up to the beginning of the month.	During the month.	Total.	Total up to the beginning of the month.	During the month.	Total.	Up to the beginning of the month.	During the month.	Total.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

APPENDIX XIV (*b*).

[Paragraph 50.]

Form of monthly account to be submitted by the lessees of minor forest produce and yepi fibre.

Name of farm.	Name of contractor.	Name of produce collected.	Place of delivery.	Quantity collected.			Quantity transferred.			Name of the depot in which the stock is held.	Quantity in the depot.	Rate at which the produce was sold during the month.	Name and address of the purchaser.	Purpose for which the produce is used and where.	Rate at which collected.	Remarks.
				Total up to the beginning of the month.	During the month.	Total.	Up to the beginning of the month.	During the month.	Total.							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

APPENDIX XV.

[Paragraph 57.]

List of Revenue firkas—Reserves and unreserves.

Reserves.	Unreserves (villages).
	KURNOOL RANGE.
	DHONE TALUK.
	Veldurti firka.
Lanjabanda extension. and	Veldurti. Agavali. Ramallakota. Pendekallu. Sarafarajapuram. Narsapuram. Narlapuram. Mallipalli. Palagummi. Kalugotta. Bukkapuram. Yemboi. Cheruklapad.
	KURNOOL RANGE—*cont.*
	DHONE TALUK—*cont.*
	Veldurti firka—cont.
Lanjabanda extension. and	Togarchedu. Lallagokulpad. Krishnagiri. Potugallu. Mannekuntla. Lanjabanda. Sudepalli. Goverdhanagiri. Yerukalacheruvu. Amakatadu. Bogole. Erragudi. Boyampalli. Peremula.

List of Revenue **firkas—Reserves and** unreserves—*cont.*

KURNOOL RANGE—*cont.*

Kurnool Taluk.

Kurnool firka.

Reserves.	Unreserves (villages).
......	Kurnool.
	Panchalingala.
	Etivala Tandrapad.
	Gondipalli.
	Devemeda.
	Dinnedevarapad.
	Joharapuram.
	Dupadu.
	Pedda Tekur.
	Lanjabolur.
	Salkapuram.
	Ayyavari Gokulapad.
	Peddapadu.
	Roza.
	Mamedalapadu.
	Nidazur.
	Rudravaram.
	Gopala Singavaram.
	Kallur.
	Pudur.
	Psupula.
	Nuthenapalli.
	Basavapuram.
	Ulchala.

Ulindakonda firka.

Reserves.	Unreserves (villages).
Yaperlapad R.F.	Ulindakonda.
	Kuruva Nagulapuram.
	Mallapuram.
	Penchikalapad.
	Budidapad.
	Amadaguntla.
	Erradoddi.
	Anugonda.
	Gorantla.
	Laddgiri.
	Konganapadu.
	Bollavaram.
	Pusupithu.
	Remaduru.
	Nayakallu.
	Vhetla Mallapuram.
	Yaperlapad.
	Bastipadu.
	Kudumuru.
	Mudumulagurthi.
	Vaukuru.
	Parla.
	Chinna Tekur.

Vorvakallu firka.

Reserves.	Unreserves (villages).
Gudithamadugu R.F.	Loddipalli.
	Bodduvaripalle.
	Diguvapad.
	Puricherla.
	Ketavaram.
	Tadakanapalli.
	Guttapad.
	Sekunala.
	Tippayapalli.
	Brahmanapalli.

KURNOOL RANGE—*cont.*

Kurnool Taluk—*cont.*

Vorvakallu firka—cont.

Reserves.	Unreserves (villages).
Gadithamadugu R.F.	Konthalapadu.
	Komorulu.
	Gadithamadugu.
	Vorvakallu.
	Somayajulapalli.
	Kammadakala.
	Midivemula.
	Narnur.
	Uppalapad.
	Kaluva.
	Hussainapuram.
	B. Thandnapad.
	Palakanur.
	Uyyalavada.

Gudur firka.

Reserves.	Unreserves (villages).
......	Belagal.
	Kurandoddi.
	Kambalpad.
	Pyalakurthi.
	Malesomapuram.
	Palukudoddi.
	Gudrevula.
	Kondapuram.
	Polekallu.
	Brahmanadoddi.
	Kottakota.
	Sunkesula.
	Konthalapad.
	Edururu.
	Remata.
	Regadi Khanapuram.
	Mallapuram.
	Munugala.
	Julekallu.

Nandyal Taluk.

Panyam firka.

Reserves.	Unreserves (villages).
Panyam and Alamoor R.Fs.	Panyam.
	Alamoor.
	Bhupanapad.
	Brahmanapalli.
	Chilikala.
	Gaggaturu.
	Gonavaram.
	Gorakallu.
	Gemtanala.
	Kondajutur.
	Kavaluru.
	Konededu.
	Kothuru.
	Madduru.
	Mitnala.
	Mervaclu.
	Pusuluru.
	Balapanuru.
	Poluru.
	Togarchedu.
	Pinnapuram.
	Thammarajupalli.

List of Revenue firkas—Reserves and unreserves—*cont.*

KURNOOL RANGE—*cont.*

NANDIKOTKUR TALUK.

Nandikotkur firka.

Reserves.	Unreserves (villages).
Vaddamanu R.F.	Nandikotkur.
	Allur.
	Voddamanu.
	Brahmanakotkur.
	Damagatla.
	Bollavaram.
	Vepengatla.
	Satanikota.
	Bijinevemula.
	Malyala.
	Maddigatla.
	Konidyala.
	Nagaturu.
	Madlem.
	Tartu.
	Midthuru.
	Devanur.
	Chadutukuru.
	Chintlapalli.
	Sunkesula.
	Bannuru.
	Massapeta.
	Madumur.
	Nagaluti.

Payyapalli firka.

Reserves.	Unreserves (villages).
Peddapaya. Nallamekalapalle. Oddepalli. Devagudipad. Tekulakonda and Extensions Nos. I and II.	Peapalli.
	Chenugondla.
	Eddupenta.
	Peddpodilla.
	Kothaburuzu.
	Kalachatla.
	Potendoddi.
	Vengalampalli.
	Kothakota.
	Devarabanda.
	Mettupalli.
	Jaladurgam.
	Gundla.
	Rayampetta.
	Mallapalli.
	Rangapuram.
	Gudipad.
	Jokasenikuntla.
	Candrapalli.
	Kommammeri.
	Neredecherla.
	Burugula.
	Racherla.
	Minimeadugu.
	Madhavaram.

Koilkuntla-Owk firka.

Reserves.	Unreserves (villages).
Owk R.F. Do. Extension R.F.	Owk.
	Ramavaram.
	Nichenametla.
	Gundlasingavaram.
	Lingambodu.
	Gokuladinne.
	Annavaram.
	Sivavaram.
	Chennampalle.
	Singanapalle.
	Cherlopalli.
	Sangapatnam.
	Teanagondla.
	Ramapuram.

KURNOOL RANGE—*cont.*

NANDIKOTKUR TALUK—*cont.*

Kolimigundla firka

Reserves.	Unreserves (villages).
......	Kolimigundla.
	Kunukuntla.
	Uppalapad.
	Zunuthula.
	Pisillapalli.
	Kondanayanapalli.
	Petnikota.
	Lokkirampuram.
	Tummalapenta.
	Bandarlapalli.
	Chintalyapalli.
	Abdullapuram.
	Tallamagudu.
	Kurumanapalli.

Bandi-Atmakur firka.

Reserves.	Unreserves (villages).
Gani Reserve Nandyal extension block and portion of Nandyal reserve between Nandyal and Nandikotkur taluk.	Bandi-Atmakur.
	Bojanur.
	Billakalagudur.
	Nijanur.
	Chindukur.
	Chinnakkapalle.
	Durvasi.
	Gadiremula.
	Gani.
	Galichennayyapalem.
	Kakanur.
	Koratamaddi.
	Karimadulla.
	Manchalakatta.
	Narayanapuram.
	Peramatur.
	Parnapalle.
	Peddadevalapuram.
	Pesarvoy.
	Ramapuram.
	Santajutur.
	Tirripad.
	Erraguntla.
	Singavaram.

DHONE RANGE.

PATTIKONDA TALUK.

Pattikonda firka.

Reserves.	Unreserves (villages).
......	Pattikonda.
	Putchkayalamada.
	Gutti Yerragudi.
	Kadamagontla.
	Chekkaralla.
	Pendekallu.
	Lingamadoddegraham.
	Ratanna.
	Peddahulki.
	Chummanapalli.
	Jonnagiri.
	Edduladoddi.
	Pagdrai.
	Peravali.
	Burugula.
	Tuggali.
	Maddikera, West.
	Do. East.
	Do. North.
	Do. Agraharam.
	Hosur.
	Edavalli.

List of Revenue firkas—Reserves and unreserves—*cont.*

Reserves.	Unreserves (villages).
	DHONE RANGE—*cont.*
	PATTIKONDA TALUK—*cont.*
	Devanakonda firka.
......	Devanakonda. Jellakallu-Buddakala. Cheelili chelima. Mukella. Bardimadugula. Yelamakur. Gondlakonda. Karivemula. Konkanuru. Kottapad. Khairuppula. Mutukur. Billekallur. Pandikona. Nallachelimala. Yetakallu. Devarabanda. Nallakadadoddi. Juturu. Dudekonda. Chinna Hulti.
	Gongandla firka.
	Kappatralla. Errabadu. Palakurthi. Bailuppula. Mulagundam. B. Agraharam. Isandanda. Banavanuru. Kadivella. Tarimikkalu-Ganjihalli.

Reserves.	Unreserves (villages).
	DHONE RANGE—*cont.*
	PATTIKONDA TALUK—*cont.*
	Gongandla firka—cont.
......	Peddamarvadi. Gonegandla. Peddanallateru. Kulmala. Alavala. Thippamuru. Venugodu. Kotakonda. Kurnuru. Handri Kharivadi. D. Kotakonda. Chinna Pendekallu. Nerudupalli. Manchapuram. Karunchi. Lingamdinne Agraharam. Thimmapuram. Kondavathur.
	DHONE TALUK.
	Dhone firka
North Dhone. South Dhone. Kamalapuram. Madhavaram. Betamcherla.	Dhone. Katarkonda. Alamkonda. Chenchu Erragudi. Lakkamongaram. Malkapuram. Kocheru. Ungaralgundla. Yapadinne. Chityala. Kambalapadu. Venkatapuram. Udumapadu. Jagadurti.

APPENDIX XVI.

[Paragraph 57.]

A list of important minor forest produce collected in the Yerramalais.

Serial number and name of produce.	Botanical name.	Average annual revenue realized for three years.
		RS.
1. Tangedu	Cassia auriculata	4,776
2. Rela bark	Cassia fistula	2,387
3. Tumki leaves ...	Diospyros melanoxylon	329
4. Nux vomica... ...	Strychnos nux vomica	...
5. Kanuga seeds ...	Pongamia glabra	...
6. Tamarind	Tamarindus indica	...
7. Gallnuts	Terminalia chebula	...
8. Jeedi (marking nuts).	Semecarpus anacardium	...
9. Soapnuts	Sapindus emarginatus	...
10. Platter leaves (Moduga).	Butea frondosa	...
11. Custard apples ...	Anona Squamosa	1,294
12. Regu fruits	Zizyphus jujuba	...
13. Chittimittu	Gardenia gumnifera	...
14. Sago fibre	Arenga Saccharifera	...
15. Honey	...	...
16. Wax	...	...
17. Mango fruits ...	...	...
18. Chilla seeds	Strychnos potatorum	...
19. Palmyra fruits ...	Borassus flabellifer	...

APPENDIX XVII.

[Paragraph 58.]

SAMPLE FORM OF SALE NOTICE FOR MINOR FOREST PRODUCE.

Lease of Minor Forest Produce in the West Kurnool division.

Notice is hereby given that the right of collecting and removing minor forest produce except nux vomica in the forests specified in schedule for 12 months from 1st April or from date of execution of the agreement whichever is possible to 31st March (shrotriyam villages and local fund roads excepted) will be sold in public auction on the date, by the officers, at the places noted in the last column of the schedule subject to the conditions in paragraphs 2 to 16 infra. The sale will commence at 1 o'clock.

2. No person will be allowed to bid at the auction unless he has previously deposited a sum of Rs. 100 with the officer conducting the sale as earnest money. Every person who has furnished the above deposit should at the same time, i.e., before he is allowed to bid, further produce a certificate to the maximum amount to which he is solvent duly signed by the Tahsildar or Deputy Tahsildar within whose jurisdiction such person usually resides or owns properties. The production of such solvency certificates will be insisted on whether the bidders are well known to the officer conducting the sale or whether they offer to pay the full amount of the bid in one instalment. No person will be allowed to bid for another unless he holds a power-of-attorney duly executed in his favour authorizing him to bid on behalf of such other person. The earnest money deposits of all unsuccessful bidders will be returned to them soon after the sales are furnished, while those of the successful bidders will be retained.

NOTE.—In the case of Muhammadans, the Tahsildar or the Deputy Tahsildar furnishing a solvency certificate should enquire and note in the solvency certificate that he ('a certificate holder') has property in his own name (and not in the name of any other person in which he has any interest) to the extent of Rupees . . . (to be specified in words). If the certificate does not contain this information, the individual will not be allowed to bid at the sale.

3. The bid shall be for the whole area to be leased out.

4. The sale is subject to confirmation by the District Forest Officer who reserves to himself the right to reject any bid, including the highest bid, without assigning any reasons for so doing; if the sale amount exceeds Rs. 3,000, it is subject to confirmation by the Conservator.

5. The sale list shall be signed by the highest bidder immediately after the sale is knocked down in his name and a certificate should also be appended thereto by him to the effect that he has read and understood the terms of the sale notice and that he agrees to abide by them.

6. The highest bidder must deposit with the officer conducting the sale, immediately after the close of the sale, 50 per cent of the sale amount plus the earnest money deposited by him under paragraph 2 supra. After the sale is sanctioned, the above amount, including the earnest money deposited, will be credited towards the last two instalments in the usual course.

7. The successful bidder must remit 25 per cent of the sale amount towards the first instalment and deposit as security in the postal savings bank or at the treasuries as revenue deposit carrying no interest or in the 4 per cent terminable loan or in the form of Government promissory note within seven days from the date of the receipt of order accepting the offer 25 per cent of the sale amount subject to a maximum of Rs. 250 as guarantee for the due fulfilment of his contract. A written agreement shall also be executed by him within fourteen days from the date of receipt by him of the order sanctioning the sale in the prescribed form, which will be read out at the time of sale and copies of which can also be previously inspected at the District Forest and the Range offices. Unless and until the first instalment is paid, the security deposit is furnished, and the agreement executed as above, the contractor will not be allowed to commence work in the leased area.

8. If the successful bidder fails to remit the first instalment or to furnish the deposit referred to in paragraph 6 or to furnish security deposit or to execute the agreement referred to in paragraph 7 above within the specified time, the lease may be resold at the risk and loss of such bidder who will not only forfeit any deposits already furnished by him, but will also be liable for the loss, if any, accruing by such resale. In the latter

case the security that will be forfeited will not count towards the loss, if any, by the resale. He will, moreover, not be entitled to any profit that may result from the resale. Any removal of produce by the contractor or his heir before the execution of the agreement will be treated as an offence punishable under the Forest Act.

9. The lease amounts less the deposit of 50 per cent of the sale amount paid at the close of sale must be paid by the contractors in two equal instalments on or before the dates given below into the Huzur Treasury, Kurnool, or into any sub-treasury in the division and the receipted chalan must be sent so as to reach the Range officer concerned before the dates fixed for the payment of the instalments. In case of areas the sale amount of which does not exceed Rs. 500 in each case, the sale amounts will be paid in full before the agreement is executed.

First instalment or one-fourth of the sale amount per annum.	Within one week from the date of receipt of orders confirming the sale.
Second instalment or one-fourth of the sale amount per annum.	On or before the 1st September

N.B.—Interest at $6\frac{1}{4}$ per cent will be collected on all overdue instalments. For the purpose of calculating interest for portion of a month, interest for period not exceeding 15 days will be calculated for half a month and that for a period in excess of 15 days for a whole month.

The deposit of 50 per cent of the sale amount will then be adjusted towards the third and fourth instalments.

10. If the first two instalments are not paid on the due dates, the amount in deposit will be credited at once and a resale of the produce held immediately at the risk of the contractor forfeiting his security to Government. In the case of fresh sale, the contractor will have no claim to any excess over the original sale amount, but he will be responsible for any deficit, the security that is forfeited not counting at all towards such deficiency.

11. Intending bidders may obtain at any time further particulars regarding the sales either at the District Forest office, West Kurnool, or at the Range offices mentioned below, viz., Gundlabrahmeswaram, Bairluti, Sivapuram, Pecheruvu, Nandyal, Kurnool and Dhone.

12. The successful bidder will be put in possession of the block from the date of execution of the agreement.

13. The lessee will be held responsible for any felling within 200 yards of his block and for all fellings elsewhere effected under cover of his permits.

N.B.—The lessee will not be allowed to enter upon or work in the area leased until he has executed his agreement and paid his security.

14. All removals from leased area shall be covered by C form yellow permits which will be supplied on payment by the Forest department.

15. The boundaries of the areas advertized for sale will be read over to the bidders at the time of sale and entered in the agreement. The paths through which removals should be effected will be notified at the time of sale.

16. The lessee will also be responsible for the following conditions and restrictions which should be entered in the last column of the schedule attached to the agreement:—

(*a*) The contractor should not store the produce outside the area leased out to him, i.e., in another contractor's area.

(*b*) The contractor should not interfere with bona fide removal of leaves for manure from unreserved lands for agricultural purposes as per privileges conceded by rule 7 of the rules under section 26 of the Forest Act or from reserved forests and reserved lands on permits issued by the department at the seigniorage rate obtaining in the district.

(*c*) The removal of leaves for manure under the privileges quoted above by the ryots or others for agricultural purposes shall be subject to restrictions that a branch is not permitted to be cut at a greater distance than one foot from the growing point.

(*d*) The contractor shall be responsible for the acts of himself and persons employed by him for the removal of the produce from his leased area.

(*e*) The contractor shall at all times comply with the provisions of the Madras Forest Act V of 1882, and all rules from time to time in force thereunder and the provisions of this contract shall be taken in all respects as subject to such Act and rules.

17. Government reserve the right to early burn any part or all of the area covered by the lease whenever it is found necessary to do so, as a preventive against fire, and no compensation will be granted for any loss sustained by the lessee through such early burning.

The several kinds of produce included under the minor forest produce leases are—

Name of produce.	Botanical name.
1. Kanuga seeds	Ponugamia glabra.
2. Tamarind	Tamarindus indica.
3. Gallnuts	Terminalia chebula.
4. Jeedi (marking nuts)	Semecarpus anacardium.
5. Soapnuts	Sapindus emarginatus.
6. Platter leaves (moduga)	Butea frondosa.
7. Custard apples	Anona squamosa.
8. Regu fruits	Zizyphus jujuba.
9. Chittimittu	Gardinia gummifera.
10. Sago fibre	Arenga saccharifera.
11. Honey	......
12. Wax	......
13. Mango fruits	......
14. Chilli seeds	Strychnos potatorum.
15. Sambhur and deer horns	......
16. Ippa palukulu	Seed of Barsia latifolia.
17. Tumki fruits	Diospyros melanoxylon.
18. Velga fruits	Ferovia elephantum.
19. Yeluma antu	Anogeissus latifolia.
20. Usarikayalu	Phyllanthus emblica.
21. Sarapappu	Bochanania...... latifolia

SCHEDULE.

List of minor forest produce blocks to be sold.

Name of working circle.	Date and place of sale and the officer conducting the sale.
Period of lease—1st April to 31st March . (*Other minor produce*).	
1. Dhone range—	
(1) Pattikonda working circle except the reserve under panchayat management. (2) Veludurti working circle ... ... (3) Kurnool working circle consisting of Lanjabanda and its extension, Betamcherla and Peniem Reserved Forest (a portion in Dhone range). (4) Owk beat (5) Repalle beat	......
2. Kurnool range—	
Kurnool working circle consisting of reserves in Kurnool range included in this working circle including Pinnapuram unreserve.	......
3. Alamur palmyra tope	......
4. (Old) Owk range palmyra joists and sheaths in Owk extension except coupes I to VI.	......
Period of lease—1st April to 30th September . (*Tumki leaves*).	
1. Kurnool range—	
Whole range: Tumki leaves including unreserves.	......
2. Dhone range—	
Whole range: Tumki leaves including Old Owk.	......

Range.	Name of farm (with reserves and unreserves).	Name of produce.	Date of sale.	Place of sale.
Kurnool	Kurnool (Reserves and unreserves in Kurnool Range).	Cassia Fistula (Rela bark) ..	..	..
	Do.	Diospyros melanoxylon (Tumki leaves).	..	..
Dhone	Dhone (Reserves and unreserves in Dhone Range).	Cassia Fistula (Rela bark) ..	..	..
	Do.	Diospyros melanoxylon (Tumki leaves).	..	..

APPENDIX XVIII.

Statement showing the areas open to grazing and areas closed to grazing.

Name of range. (1)	Name of reserve. (2)	Area of the reserve in acres. (3)	Name of fuel felling series. (4)	Area of fuel felling series in acres. (5)	Average area in acres closed to grazing in each felling series or reserve. (6)	Average area in acres available for grazing. (7)
Kurnool ..	Gadithamadugu ..	4,345·00	Voddaman series.	2,566·8	2,471·00	3,157·00 *
	Voddaman	1,283·00				
	Yaperlapad	7,346·00	....	4,398·8	3,745·00	3,600·00 †
	Lanjabanda	3,950·00	....	2,937·4	734·00	3,216·00
	Lanjabanda Extension ..	3,107·00	....	..	..	3,107·00
	Bethamcherla	9,245·00	Bethamcherla and Bethamcherla reserve series.	6,147·00	1,536·00	7,709·00
	Paniem	23,271·70	Thammarajapalli series.	1,978·4	499·00	22,772·70
	Alamur	180·00	....	..	..	180·00
	Gani reserve	44,405·00	Gani series ..	1,672·8	418·00	43,987·00
	Veldurthi	883·00	....	..	883·00	. ‡
Dhone ..	North Dhone	14,346·00	North Dhone and Kamalapuram.	6,638·00	1,660·00	12,686·00
	Kamalapuram	1,880·00	South Dhone series.	4.873·00	2,773·00	6,156·00 §
	South Dhone	7,049·00				
	Owk	31,853·00	....	..	..	31,853·00
	Owk Extension No. I ..	643·00	....	..	..	643·00
	Owk Extension No. II ..	4·45	....	..	..	4·45
	Oddapalle	1,313·00	....	..	..	1,313·00
	Devagudipad	2,844·28	....	..	..	2,844·28
	Nallemekalapalle ..	683·00	....	..	..	683·00
	Madhavaram	5,889·00	Jaladurgam ..	2,495·00	623·00	22,585·60
	Jaladurgam	16,314·60	Kommamarri series.	1,211·00	308·00	
	Jaladurgam Extension No. I.	4,108	....	..	..	4,108·00
	Jaladurgam Extension No. II.	80·00	....	..	..	80·00
	Jaladurgam Addition No. I.	5·46	....	..	..	5·46
	Jaladurgam Addition No. II.	12·02	....	..	..	12·02
	Tekalakonda	715·00	....	..	..	715·00
	Total ..	189,621·18	....	34,938·64	..	143,155·98

* Stone walled area of 131 acres is permanently closed to grazing.

† Stone walled area of 2,940 acres „

‡ Permanently closed to grazing.

§ Stone walled area of 1,550 acres is permanently closed to grazing.

APPENDIX XIX (*a*).

[Paragraph 63.]

SAMPLE FORM OF GRAZING NOTIFICATION.

Rules and Regulations Regarding Grazing.

Conditions relating to the grazing of cattle in the reserved forests of the Kurnool West, South, and East Forest divisions during the year from 1st April to 31st March .

The grazing of cattle is allowed in all the reserved forests in the division, with the exception of the areas notified in Schedule A attached. Penning within reserves is permitted at pentas shown in Schedule B subject to the conditions laid down in paragraphs 3, 4 and 5 infra.

2. Grazing permits will be issued in the several ranges of the division by the Forest Officers, viz., Rangers, as well as permit-issuing officers specially appointed for the purpose. The permits will apply to the year from the date of issue to 31st March .

3. The scale of grazing fees is given below:—

	Non-penta cattle.			Penta cattle.		
	RS.	A.	P.	RS.	A.	P.
Sheep per head	0	4	0	0	8	0
Cows and bulls per head	0	8	0	1	0	0
Buffaloes per head	0	12	0	2	0	0

Note.—(*a*) Goat browsing is prohibited in all reserves in the district. Chenchus are allowed to browse goats which are their own but not of others. The concession to graze goats and other cattle by Chenchus is subject to the limit fixed at the settlement.

(*b*) For the purpose of levying the scale of grazing fees shown above, the term—

(1) 'Non-penta cattle' will be held to apply only to the following descriptions of cattle:—

(i) *Local cattle*, i.e., cattle of the village or villages within the limits of which the reserve is situated or it adjoins. *Such cattle have the concession of grazing only in approved pentas without any extra fees beyond those fixed for non-penta cattle.* Where a reserve which adjoins or includes in it a portion of the village, has either no pentas in it, or is ordinarily not open to penta grazing, the local cattle concerned will have the concession of being admitted to grazing in approved pentas, if any, in the adjacent reserve provided such pentas are in the same range.

(ii) *District cattle*, i.e., cattle belonging to bona fide ryots, and not to traders of cattle, living in village [other than those referred to in (1)] against 'local cattle' of Civil district of Kurnool, *provided that such cattle do not seek grazing in pentas.*

(2) The term 'Penta cattle' will be held to apply to—

(i) all cattle of the revenue district of Kurnool not covered by (*b*) (1) (i) and (*b*) (1) (ii) above;

(ii) all cattle belonging to professional cattle breeders such as Lambadis or Sugalis of the Kurnool district; and

(iii) all cattle belonging to districts outside Kurnool, whether or not the cattle, in any of the above cases, seek penta grazing in the reserves of the district.

NOTE.—The cattle of Lambadis or Sugalis owning lands in the villages adjoining the reserves to which they purchase permit will be charged non-penta cattle rates of grazing fee up to a limit shown below.

One pair of cattle for every 30 acres dry land or portion thereof in black cotton soil and two pairs of cattle for every 10 acres of portion thereof of wet land.

Permits will be issued at the non-penta cattle rates to the Sugalis by Range officer only in whose reserves they wish to graze their cattle, when the certificates of village officers produced are to his satisfaction. Permit-issuing gumastas are not authorized to issue permits for such cattle.

(*c*) 'District cattle' already covered by permits bought at non-penta rates, when seeking penta grazing later, should be covered by another set of permits, for the difference in value between the non-penta and penta rates, *issued in the name of the original buyer or buyers of permits, reference to the corresponding numbers and dates of the original grazing permits being invariably quoted in the permits subsequently bought for the difference in value.*

4. No fee will be required for penning cattle in approved pentas, either in respect of 'Local cattle' or in respect of all other cattle, so long as they are covered by proper permits for grazing as laid down in paragraph 3 above. In the case, however, of 'Local cattle' a penning licence in the usual form marked 'Free' should be obtained from the Range Officer concerned, who will issue it, on application, after satisfying himself that

the cattle actually belong to the privileged village and that they are covered by necessary grazing permit tenable for the year and that the penta grazing is sought for only in respect of pentas approved for that village. Duplicates of such penning licences should be submitted by the Range Officer to his District Forest Officer at the same time as the originals thereof are issued for scrutiny and check with the grazing notification in the District Forest office.

5. A list of approved pentas and also a list of villages the cattle of which are deemed 'Local cattle' are published in Schedule B in respect of each reserve. Penta rates will be levied in the case of 'Local cattle' that seek grazing in pentas other than those attached to the privileged villages concerned as shown in Schedule B.

6. Calves still drawing milk from their mothers, i.e., up to the age of six months, will be allowed to graze free. The above concession applies only to calves accompanying the mother and not to those which are driven independently. Calves admitted free at the beginning of the year as being under six months may be allowed to graze free for the whole of the first half of the year but should pay a half rate for the second half year, while calves entering the second half of the year free as being under six months will be permitted to graze free for the whole of the second half. The graziers' own estimate of the age of a calf may be accepted in all but glaringly misstated cases.

7. Permits taken will hold good for the whole range in which they are taken. In the case of grazing being required in two or more ranges of one division or of two adjoining divisions, cattle licensed to graze in one range will be permitted to enter the adjoining ranges to a distance of half a mile without being considered to have trespassed.

8. Each cattle-owner must appoint a responsible herdsman who should invariably be at least 15 years of age and his name as well as the name of the cattle-owner should be entered in the permit. The herdsman must always accompany the cattle and carry the permits with him in a tin or a hollow bamboo and produce it on demand by any Forest officer. The excuse that permits are left at home will not be accepted. At least one herdsman is required for every 50 head of cattle or 100 head of sheep. Permits will be frequently checked by the Forest officers in charge of the reserved forest. If any cattle-owner wishes to appoint a new herdsman, he should inform the Ranger and get the necessary corrections made in the permit.

9. For the convenience of the ryots, permit-issuing officers are stationed at villages adjoining the reserve. The permit-issuing officers will tour in villages for the issue of permits according to their programme which will be tom-tomed in advance for the information of villagers. Ryots may also obtain permits required by them from the Range officers. Applicants who prefer to obtain permits at the Range office may do so at any time when the Ranger is at headquarters. Forest guards and watchers are not authorized to receive any grazing fees and the cattle-owners are strictly prohibited from making any payments to them on this account. Cattle-owners are further required to see that the permits applied for by them are given to them immediately after the necessary payment is made and that the correct number of animals and the exact amount paid are clearly noted.

10. Vernacular copies of the terms of the grazing notice will be printed in the village sheet of the district gazette for supply to the village reddis to be tom-tomed in their villages and will be affixed to the notice board at each range and taluk offices and village reddi's chavadi. Forest patrol officers, forest guards and watchers will have each a copy of the same.

11. Range officers, foresters and permit-issuing officers will send to every patrol officer a monthly list of the permits issued. To prevent the use of time-expired permits, the year of validity is stamped across the permit.

12. No grazing is allowed in any of the coupes mentioned in the schedule annexed. Cattle found grazing in such coupes will be impounded and the graziers or owners will be liable to prosecution and to their permits being cancelled.

13. All permits that are issued by any permit-issuing officer should contain the following details entered in them:—

(*a*) Name of the village to which the cattle belong.
(*b*) Name of the cattle-owner.
(*c*) Name of the area where such cattle will generally graze.
(*d*) Name of the herdsman.
(*e*) If the owner himself grazes his cattle, it must be so stated in the remarks column.

14. Free removal of grass by head-loads only will be allowed in all reserves under the Forest department and even from the felled coupes as long as the privilege is not abused.

15. For removals by cart-loads a seigniorage fee of As. 5 per cart-load will be charged. Permits for cart-loads can be had from the concerned range or permit-issuing officer.

16. The attention of all graziers is drawn to section 24 of the Forest Act which runs as follows:—

"Every person who exercises any right in a reserved forest or who is permitted to pasture cattle in such forests and every person who is employed by the Government shall be bound to furnish without unnecessary delay to the nearest Forest officer or the Police Station-house officer any information he may possess regarding the occurrence of a fire in or near such forest or the commission of or intention to commit any forest offence and shall assist any Forest officer or police officer demanding his aid—

(*a*) in extinguishing any fire occurring in such forest,
(*b*) in preventing any fire which may occur in the vicinity of such forest from spreading in such forest,
(*c*) in preventing the commission in such forest of any forest offence, and
(*d*) when there is reason to believe that any such offence has been committed in such forest in discovering and arresting the offender:
(*e*) if there are fires in the areas not early burnt by the Forest department the area is liable to be closed."

17. The attention of all graziers is invited to section 21 (*c*) of the Forest Act which prohibits the kindling of fire at any place not authorized by the District Forest Officer. No fires are allowed in any reserve except recognized halting places.

18. All permits are subject to the above conditions as well as those on the back of the permits themselves.

19. Government reserve the right to burn any part of all of any grazing block or blocks whenever they wish to do so and no compensation will be given for any loss sustained by the holder of a grazing permit through the burning of such block or blocks.

20. Grazing permits cannot be transferred by purchaser to any one else.

21. Permits will be procurable from the following permit-issuing gumastas:—

Schedule A.

Name of range.	Name of reserve.	Area in acres.	Area closed to grazing.		Area open to grazing—column (3) minus column (5) equal to column (6)
			Name of block or coupe in the reserve closed to grazing.	Area in acres.	
(1)	(2)	(3)	(4)	(5)	(6)
					ACS.
Dhone	Peddapaya	3,366	....	..	3,366·00
	Tekulakonda	715	....	..	715·00
	Do. Extension I ..	158	....	..	158·00
	Do. do. II ..	862	....	..	862·00
	Devagudipad	2,844	....	..	2,844·00
	Voddepalli	1,313	....	..	1,313·00
	Nallamekalapalle	683	....	..	683·00
	Jaladurgam	16,815	Coupe I of 1922–23, South series.	30·00	..
			Coupe I of 1925–26, North series	80·00	..
			Coupe II of 1926–27, North series.	70·00	..
			Coupe III of 1927–28, North series.	72·00	..
			Coupe IV of 1928–29, North series	72·00	..
			Total ..	324·00	16,389·00
	Peapalli	1,218	Coupes I to III Kommamani.	102·00	1,218·00
	Jaladurgam Extension I ..	4,108	....	..	4,108·00
	Jaladurgam Extension III and additions I and II.	97	....	..	97·00
	Owk reserve	31,853	....	..	31,853·00
	Owk Extensions I and II ..	647	....	..	647·00
	South Dhone	7,049	Fuel coupes I to XII ..	2,122·90	4,926·00
	North Dhone	14,346	Fuel coupes XVII of 1928–29 and XXIII.	364·00	13,982·00
	Kamalapuram	1,880	Fuel coupes XIII to XVI ..	826·00	1,054·00
	Madhavaram	5,889	Fuel coupe V	60·00	5,829·00
Kurnool ..	Lanjabanda	3,950	....	..	3,950·00
	Lanjabanda Extension ..	3,107·50	....	..	3,107 00
	Bethamcherla	9,245	....	..	9,245·00
	Veldurthi	883	....	883·00	..
	Gadidamadugu	4,345	Stone walled areas	1,831 00	2,514·00
	Voddemanu	1,283	Do.	420·00	863 00
	Yaparlapad	7,346	Do. 2,940 ..	3,260·00	4,086·00
	Gani	44,405	Coupe No. XV 160 ..	..	44,405·00
	Panyam	23,271·75	Do. XVI 160 ..	..	23,271·75
	Alamur	180	....	..	180

APPENDIX XIX (*b*).

[Paragraph 63.]

List of pentas in the Yerramalais.

Name of range. (1)	Name of reserve. (2)	Number and name of penta. (3)	Names of villages whose cattle are entitled to free penta grazing in that penta. (4)
Dhone range	Owk reserve	(1) Kunagiripallipenta	Kunukuntla.
		(2) Arimanipenta	Mettupalli and Konapuram.
		(3) Magulagarigavanipenta	Konnapuram.
		(4) Harpanapallipenta	Owk, Mettupalli and Gundlasingavaram
		(5) Lingeswamipenta	Gundlasingavaram and Annavaram.
		(6) Nerepupenta	Ramavaram and Annavaram.
Kurnool range	Nil	Nil	Nil.

APPENDIX XX.

[Paragraph 72.]

Form for recording progress of Sandal propagation in range, during (with sample entries.)

Serial number and name of beat.	Number of patches to be taken up as per prescription in the working plan.	Work actually done.					Notes of inspection by the Range Officer and District Forest Officer with initials and date.
		Number of patches propagated during the year.	Locality and method of propagation employed.		Date of sowing and results.	Date of second and subsequent sowing if any, and results.	
			Locality.	Method employed.			
1. Gadithamadugu.	6	6	(*a*) New Pudur rest-house in the reserved forest.	Nursery	20th May 1931. Germination good.	Nil.	
			(*b*) Near Dongalacheruvu.	Direct dibbling.	16th May 1931. Poor germination.	23rd August 1931. Germination good.	
			(*c*) Bapanadanisela.	Do.	18th May 1931. Only 30 per cent germination.	20th August 1931. Poor germination.	
			(*d*) Chintamanupenta.	Do.	15th May 1931. Only 40 per cent germination.	27th August 1931. Germination very bad.	
			(*e*) Gorolipenta.	Do.	21st May 1931. Germination good.	Nil.	
			(*f*) Near Padimpadu rastha about one furlong from the reserved line inside the reserved forest.	Do.	17th May 1931. Germination 75 per cent.	Nil.	
	and so on for other beats.						

APPENDIX XXI.

[Paragraph 79.]

SALE OF AGRICULTURAL IMPLEMENTS.

Statement showing the rates at which lessees of timber, fuel, bamboos, etc., coupes are bound to sell the undermentioned produce at the edge of coupe after cutting and collection for bona fide domestic use and for agricultural implements.

Serial number.	Description of produce, agricultural cutting and fencing materials.	Selling rate, if the sale is at the edge of the coupe after the material is cut, collected and stored by the lessee.						If the sale is at the edge of the coupe after the material is cut, collected or stocked by the lessee.
		By head-load or piece or pair or set, as the case may be.			By cart-load.			
		Rate based on the lease amount normally paid to Government by lessees for the produce of the coupe.	Cost of collection.	Total.	Rate based on the lease amount normally paid to Government by lessees for the produce of the coupe	Cost of collection.	Total.	
	I.—AGRICULTURAL IMPLEMENTS.							
	(*b*) *Cart materials.*	RS. A. P.	RS. A. P.	RS. A. P.	..			RS. A. P.
1	Spokes and felloes, set of 24 spokes and 12 felloes, 11 cubic feet—							
	(*a*) Teak	27 8 0	6 0 0	33 8 0	..	..	..	..
	(*b*) Yegi	33 0 0	6 0 0	39 0 0	..	..	..	..
	(*c*) Miscellaneous	15 0 0	6 0 0	21 0 0	..	..	..	..
2	Bandi noga (cart pole) wallamaddi nemi species 0·75 cubic foot ..	1 4 0	0 2 0	1 6 0	..	..	..	0 15 0
3	Bandi kadi (yoke) chekarny, vadde and battaganapu, 0·5 cubic foot ..	0 14 0	0 4 0	1 2 0	..	..	..	0 13 0
4	Bandiparam kommulu (side shafts) each 1·5 cubic feet, nallamaddi, billudu, nemi species nallatumma.	3 0 0	0 8 0	3 8 0	..	..	..	2 10 0
5	Parampatta (cart frame and cart pieces) 0·25 cubic foot, nemi, yegi, chirman, billudu and jettegi ..	0 3 0	0 0 6	0 3 6	..	..	..	..
6	Dorimoddu (A and B), 2·00 cubic feet, tumma and tellatumma, yaviah, vepa, nemi, voddi, dirisene, chinduga, battaganapu, neradi ..	1 4 0	0 8 0	1 12 0	..	..	..	..
7	Bandi kundelu (nerves), 1·00 cubic foot—							
	(*a*) Billudu	2 15 0	0 5 0	3 4 0	..	..	..	1 15 0
	(*b*) Other species such as chundugosara	1 8 0	0 5 0	1 13 0	..	..	..	1 6 0
	(*c*) *Other Agricultural implements.*							
1	Pedda guntika dindu (close brakes) 2 cubic feet, yepi species	2 5 0	0 8 0	2 13 0	..	..	..	..
2	Pedda guntika noga, 0·75 cubic foot, nallamaddi	0 12 0	0 4 0	1 0 0	..	..	..	..
3	Chinna guntika dindu, 6·5 cubic feet, yepi species and nemi species ..	0 10 0	0 4 0	0 14 0	..	..	..	..
4	Damb dindu, 0·5 cubic foot, yepi, tella tumma, jettigi, nallamaddi, Sundra species	0 10 0	0 4 0	0 14 0	..	..	..	..
5	Chirman, gorthi, antumoga, 0·5 cubic foot, sundra, jettigi, billudu, yepi .. :	1 8 0	0 2 0	1 10 0	..	..	..	..
6	Peddagomu, dindu, 0·5 cubic foot, sundra and yepi species	0 10 0	0 3 0	0 13 0	..	..	..	..
7	Pedda gurthi, noga, 0·5 cubic foot, jettegi, billudu, yepi, sundra and immady	0 9 0	0 4 0	0 13 0	..	..	..	..
8	Negati noga, 0·75 cubic foot, pala, heartwood, somi, immaddy, yepi species	2 3 0	0 12 0	2 15 0	..	..	..	..
9	Plough (nogah), 1·00 cubic foot, nemmi, tummo, chakaravey, billudu, mushti, tellatumma, chinduga, nallatumma, yepi division	0 11 0	0 12 0	1 7 0	..	..	..	..
10	Nageti kadiman, 0·5 cubic foot, chakaravey, vaddi, dattaganapu species	0 15 0	0 4 0	1 3 0	..	..	..	..
11	Geda kadiman, 0·5 cubic foot, mamvadda, bettaganapu, tadu	0 15 0	0 4 0	1 3 0	..	..	..	..

N.B.—The contractors of timber, fuel and bamboo, etc., coupes are bound to sell to ryots for bona fide domestic purposes these materials at edge of coupes at rates which will be published from time to time in the local gazette.

Statement showing the rates at which lessees of timber, fuel, bamboos, etc., coupes are bound to sell the undermentioned produce at the edge of coupes after cutting and collection, for bona fide domestic use and for agricultural implements—*cont.*

Serial number.	Description of produce, agricultural, cutting and fencing materials.	Selling rate, if the sale is at the edge of the coupe, after the material is cut, collected or stocked by the lessee.						If the sale is at the edge of the coupe after the material is cut and collected or stocked by the lessee.
		By head-load or piece or pair or set as the case may be.			By cart-load.			
		Rate based on lease amount.	Cost of collection.	Total.	Rate based on lease amount.	Cost of collection.	Total.	
	II.—BUILDINGS AND HUTTING MATERIALS.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
1	Nitradu, each	2 8 0	0 4 0	2 12 0	..	..	..	..
2	Gunjalu, each	0 5 0	0 1 0	0 6 0	..	..	..	..
3	Dwara bandamams (door frames), nilvalu (upright) 2 cubic feet each 1·25 heart wood of yepi and nallamaddi only.	3 8 0	1 4 0	4 12 0	..	..	..	..
4	Addalu 1 cubic foot heart wood of yepi and nallamaddi each.	2 3 0	0 12 0	2 15 0	..	..	..	..
5	Beams—							
	I class, teak, nallamaddi, yepi, jettegi, billudu, rudraganapu.	1 15 0	0 10 0	2 9 0	..	..	..	..
	II class, 10 cubic feet (18′ long × 36″ in girth), chirman, buttaganapu, karaka, chinduga, dudda, vepa, 10 cubic feet (18′ long × 36″ in girth).	1 0 0	0 10 0	1 10 0	..	..	..	..
6	Rafters round with or without back—							
	(*a*) I class, long teak, yegi, nallamaddi, jettegi, billudu, 1·75 cubic feet per rafter.	0 10 0	0 0 8	0 10 8	..	..	..	0 6 8
	I class, short, teak, yegi, nallamaddi, jettegi, billudu, 1·5 cubic feet per rafter.	0 5 0	0 0 8	0 5 8	..	..	..	0 4 8
	(*b*) II class, long, teak, yegi, nallamaddi, jettegi, billudu species, 1·75 cubic feet per rafter.	0 5 0	0 0 6	0 5 6	..	..	..	0 4 6
	II class, short, teak, yegi, nallamaddi, jettegi, billudu species, 1·5 cubic feet per rafter.	0 2 6	0 0 6	0 3 0	..	..	..	0 2 6
7	Vasalu irrespective of species L. 12′ and below 8″ side, 0·25 cubic foot.	0 2 0	0 0 6	0 2 6	..	..	..	0 1 6
8	Kurnool pillars L. 12′ nallamaddi chinduga, chirman, somi, chenangu, yepi, teak, jettegi, ippa, battaganapu, rudraganapu, gummapoma—							
	(*a*) I class, 2′ to 2½ girth, 3·75 cubic feet each.	2 0 0	0 2 0	2 2 0	..	..	..	..
	II class, 2′ girth 3 cubic feet each.	1 2 0	0 2 0	1 4 0	..	..	..	..
9	Bamboo (no seigniorage rates given in C.C.P. No. 15, dated 7th April 1921)—							
	(*a*) I class per 100 (125 to a cart-load).	3 12 0	1 14 0	5 0 0	..	..	..	..
	(*b*) II class per 100 (200 to a cart-load).	2 0 0	1 0 0	3 0 0	..	..	..	..
	(*c*) III class per 100 (300 to a cart-load).	1 8 0	0 8 0	2 0 0	..	..	..	..
	(*d*) Scaffolding bamboos, each ..	0 8 0	0 1 0	0 9 0	..	..	..	..
	(*e*) Mullu (karralu per 100) ..	1 3 0	0 6 0	1 9 0	..	..	..	..
	(*f*) Cot splits, each	0 3 0	0 0 6	0 3 6	..	..	..	..
	(*g*) Karadi babbalu, each	0 2 6	0 0 9	0 3 3	..	..	..	..
	(*h*) Walking sticks per 100 ..	1 4 0	0 8 0	1 12 0	.	..	..	..
	(*i*) Erikala splits per cart-load of 24 bundles.	11 8 0	6 0 0	17 8 0	..	..	..	..
	(j) Medara splits per cart-load of 12 bundles.	7 8 0	4 8 0	12 0 0	..	..	..	..
10	Palmyra leaves per 1,000	2 0 0	2 0 0	4 0 0	..	..	..	..
	III.—FENCING MATERIALS.							
	Thorns	..	..	..	0 10 2	2 0 0	2 10 0	..
	IV.—OTHER DOMESTIC REQUISITES.							
	Fuel below 5″ circumference	..	..	..	0 12 0	0 12 0	1 8 0	..

APPENDIX XXII.

Record of Works.

Dhone Range.

Prescriptions of Working Plan.				Result of operations.					
Year. (1)	Locality. (2)	Area in acres. (3)	Nature of work. (4)	Year. (5)	Locality. (6)	Area in acres. (7)	Nature of work done. (8)	Expenditure. (9)	Remarks. (10)
			FUEL WORKING CIRCLE.					RS. A. P.	
			A. Measures Prescribed.						
			North Dhone Series.						
1930–31 ..	Coupe I in North Dhone reserve.	47	Sowing seeds of indigenous species in debris burnt patches.	1930–31 ..	Coupe I in North Dhone Reserve.	47	Seeds of Hardwickia binata, Chloroxylon sweitenia and Anogeissus latifolia were sown.	7 4 0	The expenditure represents cost of collection of seeds and staking burnt patches.
1930–31 ..	Do.	47	Early-burning periphery of felled coupes.	1930–31 ..	Do.	47	Periphery was burnt in December 1930.	3 9 0	Expenditure is worked on an area basis from the cost of early-burning all felled area in the whole range.
			Kamalapuram Series.						
1930–31 ..	Coupe I in Kamalapuram reserve and so on for the other series one by one.	50	Sowing seeds of indigenous species in debris burnt patches.	1930–31 ..	Coupe I in Kamalapuram reserve.	50	Seeds of Hardwickia binata and Chloroxylon sweitenia were sown.	7 0 0	The expenditure represents cost of collection of seeds.
			B. Measures suggested.						
			North Dhone Series.						
1930–31 ..	North Dhone reserved forest, stone walled area.	1,550	Stone wall to be repaired wherever fallen.	1930–31 ..	North Dhone reserved forest, stone walled area.	1,550	200 running feet near Allonikunta repaired.	12 8 0	....
			C. Measures neither prescribed nor suggested but carried out						
			Jaladurgam Series.						
	Jaladurgam series and so on for the other series one by one.	..	....	1930–31 ..	Jaladurgam reseved forest.	14	Repaired Garladinne cart-track.	38 0 0	This was to facilitate transport of produce from next year's coupe.
			BABUL WORKING CIRCLE.						
1930–31 ..	Block II in Veldurthi reserved forest.	14	Thinning the dense growth and extraction of dead and dying trees.	1930–31 ..	Block II in Veldurthi reserved forest.	14	Dense growth was thinned and dead and dying trees extracted.	..	....

Record of Works—*cont.*

Dhone Range—cont.

Prescriptions of the working plan.				Result of the operations.					Remarks.
Year.	Locality.	Area in acres.	Nature of works.	Year.	Locality.	Area in acres.	Nature of work done.	Expenditure.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			YEPI FIBRE WORKING CIRCLE.					RS. A. P.	
			A. Measures prescribed.						
			North Dhone Series.						
1930–31 ..	Coupe V of North Dhone reserved forest.	320	Demarcation of felled coupes with coupe stones.	1930–31 ..	Coupe V of North Dhone reserved forest.	320	Demarcated with stones bearing inscription of year of felling, etc.	6 8 0	The coupe was felled in 1929–30.
1930–31 ..	Coupe V of Jaladurgam ..	224	Do. do.	1930–31 ..	Coupe V of Jaladurgam series.	224	Do. do.	7 4 0	Do. do.
			B. Measures suggested.						
			North Dhone Series.						
1930–31 ..	Coupe I of North Dhone reserve and so on for the other series one by one.	372	Survey and demarcation of coupe.	1930–31 ..	Coupe I of North Dhone series.	372	Demarcation with a 12 feet cleared line.	2 4 0	Only one side of the coupe boundary required demarcation with a cleared line.
			C. Measures neither prescribed nor suggested but carried out—Nil.						
			PALMYRA WORKING CIRCLE.						
			A. Measures prescribed—Nil.						
			B. Measures suggested.						
			Owk Series.						
..	....	..	Marking trees for felling ..	1930–31 ..	Owk extension reserved forest.	320	Marked 400 trees with green paint.	7 14 0	These trees are to be felled in 1931–32.
			C. Measures neither prescribed nor suggested but carried out—Nil.						

N.B.—(1) Separate registers will be maintained for each range.
(2) A number of pages will be allotted for each working circle.
(3) All prescriptions for the whole working circle should be dealt with first, then, all suggestions and then other works done.

Control Book.

Dhone Range.

Prescriptions of the working plan.				Result of the operations.						Remarks.
Year.	Locality.	Area in acres.	Nature of work.	Year.	Locality.	Area in acres.	Nature of work done.	Yield.	Revenue.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
			FUEL WORKING CIRCLE.						RS.	
			NORTH DHONE SERIES.							
1930–31	Coupe I of North Dhone reserve.	65	Felling under coppice with standard system.	1930–31	Coupe I in North Dhone reserve.	67	Felled under coppice with standard system.	100 cubic feet small timber. 301 tons fuel.	335	1,540 standards reserved. Yield is based on contractors' figures.
			KAMALAPURAM SERIES.							
1930–31	Coupe I in Kamalapuram reserved forest and so on for the other series one by one.	55	Felling under coppice with standard system.	1930–31	Coupe I of Kamalapuram reserved forest.	54	Felled under coppice with standard system.	90 cubic feet of small timber. 180 tons fuel.	216	1,180 standards reserved. Yield is based on contractors' figures.
			BABUL WORKING CIRCLE—Nil.							
			YEPI FIBRE WORKING CIRCLE.							
			NORTH DHONE SERIES.							
1930–31	Coupe I in North Dhone reserved forest.	372	Extraction of yepi fibre from pollarded and young shoots below 12 inches in girth.	1930–31	Coupe I in North Dhone reserved forest.	372	Yepi fibre was extracted from trees above 4 feet in girth by pollarding.	3,920 lb. of yepi fibre.	392	Only trees about 4 feet in girth are to be pollarded. Yield is based on contractors' figures.
			JALADURGAM SERIES.							
1930–31	Coupe I in Jaladurgam reserve and so on for other series one by one.	192	Extraction of yepi fibre from pollarded and young shoots below 12 inches in girth.	1930–31	Coupe I in Jaladurgam reserve.	192	Yepi fibre was extracted from trees above 4 feet in girth by pollarding.	1,920 lb. of yepi fibre.	384	Only trees about 4 feet in girth are to be pollarded. Yield is based on contractors' figures.
			PALMYRA WORKING CIRCLE.							
			OWK SERIES.							
1930–31	Owk extension reserve.	643	Extraction of 300 mature and overmature dead or dying trees.	1930–31	Owk extension reserve.	643	180 mature and overmature trees were extracted.	1,818 cubic feet.	540	300 trees were marked but there was no demand for 120 trees.

Control Book—*cont.*

Dhone Range—cont.

Prescriptions of the working plan.				Result of the operations.						
Year. (1)	Locality. (2)	Area in acres. (3)	Nature of work. (4)	Year. (5)	Locality. (6)	Area in acres. (7)	Nature of work done. (8)	Yield. (9)	Revenue. (10)	Remarks. (11)
			PALMYRA WORKING CIRCLE—*cont.*						RS.	
			OWK SERIES—*cont.*							
1930–31	One block out of 20 in Owk extension reserved forest and so on for the other series one by one.	Not provided.	Clear felling under story.	1930–31	Block 7 in Owk extension reserve.	28	Undergrowth was clear-felled.	59 tons fuel ..	42	Yield is based on contractors' figures.
			MINOR FOREST PRODUCE WORKING CIRCLE.							
			D. MELANOXYLON (TUMKI) LEAVES.							
1930–31	All reserves and unreserves of the range.	..	Lease of right to collect tumki leaves.	1930–31	All reserves and unreserves of Dhone range.	..	Right to remove tumki leaves was sold.	4,300 bundles of 500 leaves each.	73	The lease year was from 1st December 1930 to 30th June 1931.
			USUFRUCT OF PALMYRAS.							
1930–31	Owk reserved forest (extension) and so on for the other leases one by one.	643	Lease of right to collect fruits and leaves of palmyra.	1930–31	Owk extension reserve.	643	The right to remove palmyra fruits and leaves was sold.	1,500 lb. fruit. 15,000 leaves.	22	Yield is based on contractors' figures.

N.B.—(1) Separate registers will be maintained for each range.
(2) A number of pages will be allotted for each working circle.
(3) All prescriptions for the whole working circle should be dealt with first, then, all suggestions and then other works done.

CONTROL BOOK FOR GRAZING WORKING CIRCLE.

Year.	Name of range.	Total area of the range.	Area closed to grazing.	Area available for grazing.	Animals admitted.												Total number of cow units.	Total revenue.	Remarks.
					Non-penta.						Penta.								
					Cows.		Buffaloes.		Sheep.		Cows.		Buffaloes.		Sheep.				
					Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.	Number.	Rate.			
(1)	(2)	(3)	(4)	(5)	(6)		(7)		(8)		(9)		(10)		(11)		(12)	(13)	(14)
						RS.		RS.		RS.		RS.		RS.		RS.		RS.	

APPENDIX XXIII.

[Paragraph 85.]

A. *Form of Control Journal for Fuel Working Circle.*

I. General constitution of the working circle.

II. Forest offences—their nature and intensity.

III. Fire protection—

(1) Early-burning the periphery of the felled coupes, time of the year, cost of operation.

(2) Areas burnt by later fires with their origin and cause.

IV. Grazing—result of closure of coupes—condition of the growing stock from year to year after the coupes are reopened to grazing.

V. The fellings—agency and method of felling employed; time of the year when the work was taken up and completed, etc.

VI. Regeneration—

(1) Natural regeneration.

(2) Rate and growth of coppice of some of the more important species.

VII. Yield, cost of extraction, market for the produce extracted, etc.

VIII. Statement of revenue and expenditure.

IX. General remarks.

B.—Form of Control Journal for the Yepi Fibre Working Circle.

I. General constitution of the working circle.

II. Time of the year when the right of extraction was leased, time of the year when the work was taken up and completed.

IV. Yield of the produce, chief centres of consumption, selling rate in the neighbouring market.

IV. Yield of the produce, chief centres of consumption, selling rate in the neighbouring market.

V. Effect of pollarding on the standing growth; whether branches left seeded or not, etc.

VI. Financial results as compared with those anticipated in the working plan.

VII. General remarks.

C.—Form of Control Journal for the Palmyra Working Circle.

I. General constitution of the working circle.

II. Time of the year when the produce was in demand and the number and average rate at which trees were sold.

III. Statement of revenue and expenditure.

D. *Form of Control Journal for the Minor Forest Produce Working Circle.*

I. General constitution of the working circle.

II. Time when each item of produce was available for extraction, its abundance, etc.

III. Agency employed for collection and the rate paid for the collection of each item of the produce at specified centres.

IV. Statement of revenue and expenditure.

V. General remarks.

E.—Form of Control Journal for the Grazing Working Circle.

I. General constitution of the working circle.

II. Rates of grazing fees in force from time to time with the average annual grazing incidence and revenue for each grazing unit.

III. Localities overgrazed, etc., with reasons for the same; time of year when cattle depend entirely on forest grazing adequacy or otherwise of fodder in localities most frequented by cattle with steps, if any, taken to ease the situation.

IV. Localities where penning is permitted and number of cattle penned, localities to which cattle belong, rates and conditions governing penning, etc.

V. Statement of revenue and expenditure.

F.—Form of Control Journal for Sandal Propagation Working Circle.

I. General constitution of the working circle.

II. Number of plots taken up each year and their extent and situation.

III. Time of the year when the first sowing was done, quantity of seeds sown, number of staked patches, number of times sowing was repeated with dates each year.

IV. Number of established seedlings, their rate of growth in the current year's plot and in those of the previous years.

V. Statement of revenue and expenditure.

G.—Form of Control Journal for the Veldurti Babul Working Circle.

I. General constitution of the working circle.

II. Forest offences—their nature and intensity.

III. Yield of the thinned material, the cost incurred and revenue realized.

APPENDIX XXIV.

SUMMARY OF PRESCRIPTIONS.

Fuel Working Circle.

	PAGE
There will be twelve felling series with 40 coupes in each ...	8
Method of treatment is coppice with standards	8
Rotation is 40 years	8
Mode of executing the fellings. Coupes in each series may be leased out each year	8
Standards up to 20 per acre will be retained	8
Debris to be burnt in open patches and seeds of indigenous species to be sown in the resulting ashes	12
Felled coupes to be closed to grazing for ten years	12
Fire-protection—felled coupes to be fire-protected during the period of closure	12
Collection and record of statistics	12

Instructions for the guidance of local officers.

Selection of standards—healthy and well-formed trees of Hardwickia binata to be marked	8
Method of marking—each standard to be marked with a ring of tar at 4 feet 6 inches from the base, a square blaze to be made above it and on it the serial number of the tree to be marked, etc., all climbers to be cut simultaneously with standard marking	9
Standard list to show the number, species, etc., an abstract of the standards for each species to be given; Range Officer to check at least 20 per cent and certify to that effect ...	9
Fallen portions of the stone wall should be repaired	12

Yepi-fibre Working Circle.

There are four felling series each divided into five annual coupes	13
Method of treatment—old yepi trees over 4 feet in girth to be pollarded	13
Five years' rotation is fixed	13
Mode of executing the fellings—one coupe in each series may be leased out each year. Only trees over 4 feet in girth to be pollarded. Three to four healthy shoots should be left in each tree	13

Instructions for the guidance of the local officers.

Coupes to be demarcated early in December by natural features or cut lines 12 feet wide. Each coupe to be subdivided into four or five strips by natural features. Coupes to be auctioned in March each year, etc.	13

Palmyra Working Circle.

Method of treatment—only trees over 50 feet in height to be removed	14
Mode of executing the fellings. In Alamoor and Bogeswaram topes 120 trees and in Owk extension reserve 300 trees to be marked for felling; may be sold standing	15
Undergrowth to be removed by thinning in Alamoor and cutting one coupe each year in Owk extension reserved forest.	**15–16**

Instructions for the guidance of local officers.

	PAGE
Trees in each reserve to be serially marked in green paint at the base of the tree, and the number alone at breast-height. Marking to be done in January and February by the forester. Range Officer to check and affix his property hammer-mark.	15

Minor Forest Produce Working Circle.

Cassia auriculata bark to be biennially auctioned by revenue firkas; Diospyros melanoxylon leaves to be leased annually and the reserves and unreserves of each range to form one unit; Cassia fistula bark of each range alternately to be sold each year; the right to collect the usufructs of palmyra topes to be sold each year separately. The right to catch fish in the Alamoor tank to be auctioned annually. For all other items of minor forest produce the whole working plan area is divided into four units and each will be auctioned annually.	17

Grazing Working Circle.

Each range will constitute a grazing unit	17
Areas closed to grazing—stone-walled areas, fuel coupes for ten years after felling, all sandal propagation centres will be closed to grazing	17

Sandal Propagation Working Circle.

In each beat 6 patches of 12 feet diameter each to be attempted each year	18
Nurseries to be selected near streams	18
One and a half pounds of seeds to be sown in each patch in the middle of May, second sowing in August or September—resowing in the second and third year at the same period of the year	19
Propagation centres to be fenced and fire-traced	19
Sandalwood journal to be maintained in the range and District Forest office	19

Veldurti Babul Working Circle.

Method of working—The area to be divided into ten blocks and one block to be thinned each year. Dead and dying trees and old standards 1 foot and over in girth to be extracted.	20

Prescriptions common to all working circles.

The worked coupes of Fuel and Fibre Working Circles to be demarcated by coupe-stones	21
Fire maps to be posted annually	21
Control books and record of works to be maintained for each Working Circle as shown in Appendix XXII	22
Control journals to be maintained under the heads given in Appendix XXIII	22

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Proceedings No. 424, Press, 3rd October 1931

Working plan—Revised—Yerramalais—Kurnool West Forest division—Sanctioned.

A. WIMBUSH, Esq., I.F.S.,
Acting Chief Conservator of Forests.

Proceedings—No. 424, Press, dated 3rd October 1931.

The working plan is sanctioned.

A. WIMBUSH,
Acting Chief Conservator of Forests.

(True copy)

V. G. DARRINGTON,
Personal Assistant.

To the District Forest Officer, Kurnool West,
" Conservator of Forests, Second Circle,
Copy to the other Donservators of Forests,
" District Forest Officers,
" Principal, Forest College,
" Forest Research Officer.